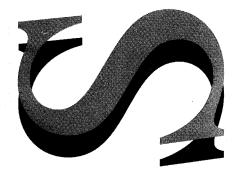


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Catalogue of the Australian National Collection of Biodeterioration Microfungi

> F. John Upsher and Corinne M. Upsher



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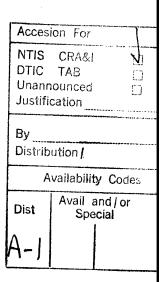


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F. John Upsher and Corinne M. Upsher

Ship Structures and Materials Division Aeronautical and Maritime Research Laboratory

DSTO-GD-0054



ABSTRACT

The Australian National Collection of Biodeterioration Microfungi is held at DSTO-AMRL, Maribyrnong, Vic. For over fifty years, it has been the repository for microfungi from diverse sources, mainly from materials and equipment. It is now a resource for taxonomic and physiological assessment, potential tools in biotechnology and for testing purposes. This is the first published catalogue of the collection.

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Catalogue of the Australian National Collection of Biodeterioration Microfungi

EXECUTIVE SUMMARY

The Australian National Collection of Biodeterioration Microfungi is located at the Maribyrnong site of Aeronautical and Maritime Research Laboratory (AMRL), which is a an establishment of the Defence Science and Technology Organisation (DSTO). This collection of microfungi was commenced during World War II when Australian military activity had extended to New Guinea and other parts of the Pacific basin and the effects of hot wet climatic conditions began to take their toll of military materiel. Moulds were destroying tentage and optical equipment as quickly as they could be replaced. Thus the impact of fungal biodeterioration was recorded as a factor in military operations and continues to be a significant factor in deterioration of materiel.

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1. Introduction

The Australian National Collection of Biodeterioration Microfungi is located at the Maribyrnong site of Aeronautical and Maritime Research Laboratory (AMRL), which is a an establishment of the Defence Science and Technology Organisation (DSTO). This collection of microfungi was commenced during World War II when Australian military activity had extended to New Guinea and other parts of the Pacific basin and the effects of hot wet climatic conditions began to take their toll of military materiel. Moulds were destroying tentage and optical equipment as quickly as they could be replaced. Thus the impact of fungal biodeterioration was recorded as a factor in military operations.

A working group was immediately formed to look into the problem. The group included some eminent mycologists from the Victorian State Department of Agriculture. The isolation and identification of the offending microfungi commenced at once and the culture collection at Maribyrnong was established. The oldest cultures include some isolates from Wewak and Manus Island in Papua-New Guinea and have now been in continuous culture for over fifty years.

The criteria used in the selection of fungi for inclusion in the collection have not been consistent. The general procedure has been to retain isolates from materials of particular interest, such as fabrics, paints and plastics, or fungi with noteworthy characteristics. In addition there have been experiments to isolate fungi from different environmental situations such as soil and air. Introductions to the collection by different operators have resulted in inconsistencies in the recording of details of some culture origins. For the sake of retaining as diverse a collection as possible, cultures continue to be retained and are included in this catalogue, even when their provenance is uncertain. Many others that were accessed to the collection have either died, for a variety of reasons, or have been deleted to reduce repetition.

One prominent location of origin is AMRL- Innisfail, Queensland. Opening in 1962, it was first known as the Joint Tropical Research Unit (JTRU) and later as the Joint Tropical Trials and Research Establishment (JTTRE). At that site there were several trials to isolate and study tropical microfungi from soil, natural and synthetic materials and from the atmosphere. Prominent genera from those trials include *Cladosporium*, *Curvularia*, and *Penicillium*.

AMRL has been an authority in the assessment of fungal resistance of materials and equipment. It is a repository for cultures for testing according to Australian Standards methods, for International Standardization Organization (ISO) methods and for other international and military standard methods. Cultures for Australian Standard methods are indicated as such in the alphabetical list and are listed separately in Part 6.

A collection of this type is a resource from which fungal strains may be used in future for taxonomic comparison, for evaluating physiological properties, for testing purposes or as potential tools in biotechnology. The cultures are currently available to research establishments or commercial laboratories for exchange or favour; those terms being more expedient than the imposition of formal accounting that would accompany an applied charge.

There are three modes of culture storage in order to satisfy the requirements of rapid access and long term stability. Cultures are held as fully sporing slopes at ambient and 4°C, as colony sections in distilled water at 4°C and as vacuum-sealed lyophilised spores.

2. Guide to the Catalogue

Names of Fungi

As a consequence of the practical emphasis of the collection, cultures are generally referred to using the anamorphic name which conforms to the asexual (imperfect), diasporic form of the fungus. Only where the ascocarpic (perfect) form is overwhelmingly dominant, as in say *Chaetomium*, is the teleomorph name used.

The Catalogue is arranged in three main parts:

- 1. Alphabetical list of cultures
- 2. Numerical list of cultures
- 3. List of cultures used in resistance testing methods.

Part 1 lists the cultures alphabetically in order of genus and species within the genus. So far as possible, species are listed according to their currently accepted name but where commonly used synonyms are used, those are cross-referred.

Two typical cultures of a species are set out and explained here.

Curvularia senegalensis [1] (Spegazzini) Subramanian [2] 1161 [3] Sisal rope, Innisfail, Qld., J. Upsher 1971 [4]: [5]. 1220 [3]Timber, Papua-New Guinea, [4] < CSIRO, E.W.B. Da Costa [6] = #NG209B [7]

- [1] Name, anamorphic binomial.
- [2] Author(s) who first named and described the species.
- [3] AMRL collection accession number.
- [4] Isolation details substratum, location, isolator/depositor, date of accession.
- [5] Where a culture requires special media or culture conditions, these are noted here. Otherwise, it should be understood that cultures are mesophilic and will grow on non-selective mycological culture media.

- [6] (<) details of where the culture was obtained if from another collection or institution.
- [7] (=) numbers applied to this strain when placed with other collections.

The following institutions are referred to in the catalogue by their acronyms. They are:

ATCC	American Type Culture Collection, Rockville, Maryland, 20852, USA
CBS	Centraalbureau voor Schimmelcultures, Oosterstraat 1, PO Box 273,
	3740 AG Baarn, Netherlands
DPIQ	Department of Primary Industry, Indooroopilly, Queensland, 4068.
IMI	International Mycological Institute, Bakeham Lane, Englefield Green,
	Egham, Surrey, TW20 9TY, UK.
WADA	Department of Agriculture Western Australia, Jarrah Road, S. Perth,
	WA 6151.
WAR	Wisconsin Alumni Research, Madison, Wisconsin, USA.

3. Acknowledgements

The authors/compilers of this catalogue wish to acknowledge as many as possible of the people who have contributed to the collection in various ways since its inception. The earliest records, we believe, only indicate the leading contributors, George Wade, Frank Crook, G.A.A. (George) Atkins, Anne Goldie, E Brookfield and 'HLJ'.

Since 1960, there has been a greater degree of continuity and it is possible to list all of those who worked on the collection at one time or another. These include W.R. (Rob) Hindson, L.E. (Lois) Lissner, Roy Bird, P.J. (Peter) Jackson, H.G. (Harry) Sokol, Tom Keen, Stewart Andrews, and C.R. (Cath) Powell. We wish also to acknowledge the input of the eminent mycologist, the late Dr. H.J. (Hari) Swart of Melbourne University who helped (JU) with identifications when Innisfail was the source of species seen for the first time.

Then there are the many who have contributed specimens, either arising from DSTO projects, from interesting 'mouldy' specimens or from the official business of some other company or research organization including notably, CSIRO. Our colleagues at AMRL, Innisfail, Queensland have contributed in many ways to the collection, none more than Wade Hoskins. Otherwise, there are too many to name individually but their contributions remain for posterity.

John and Corinne Upsher

4. Alphabetical List of Cultures

Acremoniella atra (Corda) Saccardo

1290 Timber, Maribyrnong, Vic., J. Upsher, 1975.

Acremoniula sarcinellae (Patouillard & Hariot) Arnaud ex Deighton

1656 Atmosphere, Innisfail, Qld., J. Upsher, 1992.

Acremonium implicatum (Abbott) Gams

1062 PVC, Innisfail, Qld., J. Upsher, 1971. = IMI 156892.

1065 PVC, Innisfail, Qld., J. Upsher, 1971. = IMI 156893.

Actinonema Fresenius

1288 Sealant, polyester, Innisfail, Qld., J. Upsher, 1975.

Alternaria Nees ex Fries

- 450 Paint film, AMRL, 1964.
- 649 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 840 Garments, Malaysia, J. Upsher, 1969.
- 860 Cotton-polyester caravan annex, Bradmill Pty. Ltd., Yarraville, Vic., H. Sokol, 1969.
- 1013 Paper bottle label, AMRL, H. Sokol, 1970.
- 1055 Nylon rope on life raft, Beaufort Pty. Ltd.., Melbourne, Vic., J. Upsher, 1971.
- 1066 Paint film on wood, Altona, Vic., J. Upsher, 1971.
- 1108 Glass-reinforced plastic, Innisfail, Qld., J. Upsher, 1972.
- 1126 Cotton fabric, Nylex Pty. Ltd., Mentone, Vic., P. Jackson, 1972.
- 1244 Viscose fabric in handbag, Taiwan, C. Powell, 1975.
- 1275 Flax canvas, Cloncurry, Qld., J. Upsher, 1975.
- 1321 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.
- 1329 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell,
- 1343 Life raft valise, HMAS Lonsdale, J. Upsher, 1976.
- 1361 Cotton-polyester caravan annex, Bradmill Pty. Ltd., Yarraville, Vic., J. Upsher, 1976.
- 1384 Cotton-polyester duck, rotproofed, Bradmill Pty. Ltd., Yarraville, Vic., J. Upsher, 1978.
- 1405 Cotton canvas, Brella Pty. Ltd., Reservoir, Vic., J. Upsher, 1981.
- 1425 PVC-coated camouflage net, NZ Army, J. Upsher, 1984.
- 1680 Unknown origin, 1988.

Alternaria alternata (Fries) Keissler

79 Paint, Phoenix Biscuit Co., Port Melbourne, Vic., 1948.

Alternaria cheiranthi (Libert) Bollé

1128 Laboratory contaminant, AMRL, P. Jackson, 1973.

Alternaria radicina Meier, Dreschler & Eddy

523 Atmosphere, Maribyrnong, Vic., J. Upsher, 1966. = IMI 362749. Test culture for AS 1157.

Alysidium Kunze ex Steudel

- 853 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 928 Atmosphere, Innisfail, Qld., J. Upsher, 1969. = IMI 45533.

Amorphotheca resinae Parbery. See Hormoconis resinae

Arthrinium phaeospermum (Corda) Ellis

564 Diesel fuel, AMRL, E. Brookfield, 1965.

Arthrinium sacchari (Spegazzini) Ellis

823 Atmosphere, Innisfail, Qld., R. Bird, 1969.

Aspergillus Micheli ex Link

- 281 Paint film, ABR, 1958.
- 431 PVC-coated hessian, J. Upsher, 1967.
- 634 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 702 Safety fuses, ICIANZ, Deer Park, Vic., J. Upsher, 1968.
- 771 Atmosphere, Innisfail, Qld., J. Upsher, 1968
- Rubber, S.A. Rubber Pty. Ltd., SA., R. Bird, 1969.
- 967 Laboratory contaminant, 1970.
- 993 Dried prune, J. Upsher, 1970.
- 1246 Viscose fabric in handbag, Taiwan, C. Powell, 1975.
- 1311 Silicone rubber, Innisfail, Qld., J. Upsher, 1975.
- 1347 Cotton valise for life raft, HMAS Lonsdale, Vic., J. Upsher, 1976.
- 1696 Water bath with ethylene glycol additive, C. Upsher, 1994

Aspergillus amstelodami (Mangin) Thom & Church

- 425 < Melbourne University, Botany Dept., 1961.
- 1418 < ATCC, 1983.

Aspergillus awamori Nakazima

Leather boot, Vietnam, J. Upsher, 1966. Test culture for AS 1157.

Aspergillus candidus Link

- 60 Nylon parachute fabric, AMRL, G. Wade, 1944.
- 709 Laboratory contaminant, L. Lissner, 1968.
- 882 Rubber, S.A. Rubber Pty. Ltd., S.A., 1969

Aspergillus carneus Blockwitz

- 193 Substrate unknown, Manus Island, Papua-New Guinea, G. Atkins, 1957.
- 219 Paint film, Fiji, 1958.

Aspergillus chevalieri Mangin

- 108 Laboratory contaminant, AMRL, F. Crook, 1949.
- 384 Laboratory contaminant, AMRL, G. Atkins, 1960

Aspergillus fischeri Wehmer

813 Waxed cardboard ration boxes, AMRL, J. Upsher, 1969.

Aspergillus fischeri var spinosus Wehmer

439 Wax-coated battery, AMRL, A. Goldie, 1962. = IMI 156868.

Aspergillus flavipes (Bainier & Sartory) Thom & Church

- 194 Substrate unknown, Manus Island, Papua-New Guinea, G. Atkins, 1957.
- 1270 Laboratory contaminant, AMRL, 1975.

Aspergillus flavus Link

- 5 Leather boot insole, Papua-New Guinea, G. Wade, pre-1944. = IMI 362747. Test culture for AS 1157.
- 133 Cotton canvas, Italy, R. Hindson, 1952.
- 137 Leather binocular case, Manus Island, Papua-New Guinea, W.R. Hindson, 1952.
- 429 PVC-coated hessian, Wewak, Papua-New Guinea, A. Goldie, 1962.
- 468A Atmosphere, Innisfail, Qld., R. Hindson, 1965.
- 545 Atmosphere, Innisfail, Qld, J. Upsher, 1966.
- 809 Waxed cardboard ration boxes, J. Upsher, 1969.
- 871 Safety fuses, ICIANZ, Deer Park, Vic., R, Bird, 1969.
- 923 < IMI 91096, 1969.
- 1355 Cardboard, Procter & Gamble, Cincinnati, Ohio, USA, < WAR, 1976.
- 1683 Fan in galley, HMAS Otway, C. Upsher, 1993.

Aspergillus foetidus Thom & Raper

- 469 Atmosphere, Innisfail, Qld., J. Upsher, 1966
- 1420 Unknown origin.

Aspergillus fumigatus Fresenius

- 90 Cotton canvas after soil burial, AMRL, 1948.
- 479 Atmosphere, Innisfail, Qld., R. Hindson, 1965.
- 720 Polyurethane-coated nylon mattress cover, Malaysia, J. Upsher, 1968.
- 756 Cellophane in soil, Innisfail, Qld., J. Upsher, 1968.
- 759 Iris rhizome, Melbourne, Vic., J. Upsher, 1969.
- 951 Painted wooden trolley, AMRL, J. Upsher, 1969.
- 1034 Rifle hand guard, wood-laminate, AMRL, Alexandria, NSW., J. Upsher, 1970.
- 1097 Polyurethane foam, after soil burial, AMRL, J. Upsher, 1972.
- 1682 Fan in galley, HMAS Otway, C. Upsher, 1993.

Aspergillus glaucus Link

- 46 Paper gasket, AMRL, G. Wade, pre-1944.
- 438 PVC-coated hessian, Wewak, Papua-New Guinea, A. Goldie, 1962.
- 1056 Cotton valise for liferaft, Beaufort Pty. Ltd., Melbourne, Vic., J. Upsher, 1971.
- 1102 Avtur fuel, Lae, Papua-New Guinea, J. Upsher, 1972.
- 1673 Leather, Microtech Pty. Ltd., Box Hill, Vic., D. Comar, 1993.
- 1684 Air, wardroom, HMAS Otway, C. Upsher, 1993.
- 1688 Air, wardroom, HMAS Otway, C. Upsher, 1993.

Aspergillus granulosus Raper & Thom

475 Atmosphere, Innisfail, Qld., R. Hindson, 1965.

Aspergillus heteromorphus Batista & Maia

1010 Timber, Innisfail, Qld., J. Upsher, 1970.

Aspergillus japonicus Saito

1009 Timber, Innisfail, Qld., J. Upsher, 1970.

Aspergillus luchuensis Inui

196 Substrate unknown, Manus Island, Papua-New Guinea, G. Atkins, 1957.

Aspergillus quercinus (Bainier) Church & Thom

- 189 Cotton canvas, G. Atkins, 1957.
- 1654 Leather, Microtech Pty. Ltd., Box Hill, Vic., D. Comar, 1993.

Aspergillus niger van Tieghem

- 4 Leather boot, Papua-New Guinea, G. Wade, pre-1944.
- 58 Canvas, copper-treated, G. Wade, pre-1944.
- 72 Canvas, Papua-New Guinea, G. Wade, pre-1944. = IMI 362746. Test culture for AS 1157, AS 1099 and AS 2358.
- 132 Radio case, AWA Laboratories, Sydney, NSW., < L.Fraser, 1952.
- 135 Leather binocular case, Manus Island, Papua-New Guinea, R. Hindson, 1952.
- 248 Raw cotton, Portland, Vic., G. Atkins, 1957.
- 252 Paint film, G. Atkins, 1957.
- 255 Paint film, G. Atkins, 1957.
- 428 PVC-coated hessian, Wewak, Papua-New Guinea, A. Goldie, 1962.
- 561 Avtur fuel, AMRL, L. Lissner, 1966.
- 760 Iris rhizome, Melbourne, Vic., J. Upsher, 1969.
- 870 Safety fuses, ICIANZ, Deer Park, Vic., R. Bird, 1969.
- 879 Rubber, SA Rubber Pty. Ltd., SA., R. Bird, 1969.
- 920 Origin unknown, 1969. = IMI 17454.
- 949 Painted wooden trolley, AMRL, J. Upsher, 1969.
- 1356 Cardboard, Procter & Gamble, Cincinnati, OH., USA, < WAR, 1976.
- 1681 Fan in galley, HMAS Otway, C. Upsher, 1993.

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Aspergillus ornatus Samson & Gams

- 598 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 855 Crumpet, Wallace Parker Pty Ltd., Vic., J. Upsher, 1969.
- 1392 Tarpaulin from Scorpion tank gun turret, UK., J. Upsher, 1979.

Aspergillus orzae (Ahlburg) Cohn

- 85 Unknown origin, 1948.
- 129 Flax canvas, James Miller Pty Ltd., Vic., F. Crook, 1950.

Aspergillus penicilloides Spegazzini

143 Laboratory contaminant, R. Hindson, 1952.

Aspergillus phoenicus (Corda) Thom

- 233 Bean seed, G. Atkins, 1957.
- 811 Waxed cardboard ration box, J. Upsher, 1969.

Aspergillus proliferans Smith

214 Cotton canvas, G. Atkins, 1957.

Aspergillus repens de Bary

- 65 Respirator canister, G. Wade, pre-1944.
- 103 Electrical equipment, Papua-New Guinea, HLJ, pre-1944.

Aspergillus restrictus Smith

749 Cellophane in soil, Innisfail, Qld., J. Upsher, 1968.

Aspergillus sulphureus (Fresenius) Wehmer

59 Nylon parachute fabric, G. Wade, pre-1944.

Aspergillus sydowi (Bainier & Sartory) Thom & Church

- 374 Fig jam, G. Atkins, 1960.
- 591 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 713 Laboratory contaminant, 1968.
- 1048 Flax canvas valise for life raft, RAN, J. Upsher, 1970.

Aspergillus tamarii Kita

- 430 PVC-coated hessian, Wewak, Papua-New Guinea, A. Goldie, 1962.
- 443 PVC-coated hessian, Innisfail, Qld., A. Goldie, 1963.
- 701 Safety fuse, ICIANZ, Deer Park, Vic., J. Upsher, 1968.

Aspergillus terreus Thom

- 172 Substrate unknown, Manus Island, Papua-New Guinea, G. Atkins, 1956.
- 546 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 746 Cellophane in soil, Innisfail, Qld., J. Upsher, 1968.
- 757 Cellophane in soil, Innisfail, Qld., J. Upsher, 1968. Test culture for AS 1099.
- 954 Coated nylon fabric, H. Sokol, 1969.
- 992 Dried prune, J. Upsher, 1970.

Aspergillus terreus var aureus Thom & Raper

268 Bread, G. Atkins, 1958.

Aspergillus terricola Marchal

807 Crumpet, Wallace Parker Pty. Ltd., Vic., J. Upsher, 1969.

Aspergillus ustus (Bainier) Thom & Church

- 91 Cotton canvas, treated with phenyl mercuric acetate, F. Crook, 1948.
- 179 Laboratory contaminant, AMRL, G. Atkins, 1956.
- 435 PVC-coated hessian, Wewak, Papua-New Guinea, A. Goldie, 1962.

Aspergillus versicolor (Vuillemin) Tiraboschi

- 164 Substrate unknown, Manus Island., Papua-New Guinea, G. Atkins, 1956.
- 445 PVC-coated hessian, Innisfail, Qld., 1964.
- 931 < IMI 49124, 1969.
- 1391 PVC-coated battery cable, 1979.
- 1686 Air duct, wardroom, HMAS Otway, C. Upsher, 1993.
- 1671 Leather, Microtech Pty. Ltd., Box Hill, Vic., D. Comar, 1993.

Aspergillus wentii Wehmer

177 Substrate unknown, Manus Island, Papua-New Guinea, G. Atkins, 1956.

Aureobasidium pullulans (de Bary) Arnaud

- 454 Substrate unknown, AMRL, H. Sokol, 1968. Test culture for AS 1099.
- 488 Acrylic paint panel, Innisfail, Qld., J. Upsher, 1966.
- 542 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 740 Atmosphere, Cloncurry, Qld., J. Upsher, 1968.
- 963 Laboratory contaminant, AMRL, 1970.
- 1020 Fuel, AMRL, Maribyrnong Vic., G. McVea, 1970.
- 1315 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., J. Upsher, 1975.
- 1348 Cotton valise for life raft, HMAS Lonsdale, Vic., J. Upsher, 1976.
- 1385 Cotton/polyester fabric, Bradmill Pty. Ltd., Yarraville, Vic., J. Upsher, 1978.

Bipolaris Shoemaker

684 Cotton fibre, R. Bird, 1968.

Botryodiplodia Saccardo

- 1217 Timber, < B. DaCosta, CSIRO, Forest Products Div., Clayton, Vic., 1973.
- 1226 Timber, < B. DaCosta, CSIRO, Forest Products Div., Clayton, Vic., 1973.

Botrytis Micheli ex Fries

1279 Polychloroprene rubber, Innisfail, Qld., J. Upsher, 1975.

Botryotrichum Saccardo & Marchal

1079 Laboratory contaminant, AMRL, 1972.

Byssochlamys fulva Olliver & Smith. (Perfect form of Paecilomyces varioti)

- 366 Boot on toy doll, G. Atkins, 1960.
- 897 Press-board carton, J. Upsher, 1969.

Cephaliophora tropica Thaxter

110 Paint panel, F. Crook, 1949.

Cephalosporium Corda

- 1015 Timber, Innisfail, Qld., J. Upsher, 1970.
- 1352 Cotton valise for life raft, HMAS Lonsdale, Vic., J. Upsher, 1976.
- 1590 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1986.

Cercospora Fresenius

1378 Cellophane, Innisfail, Qld., J. Upsher, 1978.

Chaetomium Kunze ex Fries

- 846 Cotton garments, Malaysia, J. Upsher, 1969.
- 864 Cotton polyester canvas, J. Upsher, 1969.
- 873 Cotton polyseter canvas, J. Upsher, 1969.
- 874 Cotton polyester canvas, J Upsher, 1969.
- 1223 Timber, CSIRO, Forest Products Div., Clayton, Vic., < B.. DaCosta, 1973.
- 1243 Viscose fabric in handbag, Taiwan, C. Powell, 1975.
- 1248 Laboratory contaminant, AMRL, C. Powell, 1975.
- 1316 Silicone rubber, Innisfail, Qld., C. Powell, 1975.
- 1345 Cotton valise for life raft, HMAS Lonsdale, Vic., C. Powell, 1976.
- 1386 Life raft, Dept.of Transport, C. Powell, 1978.

Chaetomium bostrychodes Zopf

862 Cotton-polyester canvas, H. Sokol, 1969.

Chaetomium globosum Kunze ex Fries

- 24 Cotton respirator haversack, Papua-New Guinea, G. Wade, pre-1944.
- 74 < USDA #1042.4. Test culture for AS 1157.
- 635 Cotton fabric, Indian Army, Kanpur, India, < V. Agarwal, 1968.
- 798 Cotton garments, Malaysia, H. Sokol, 1968.
- 917 < IMI 1603, 1969.
- 1199 Leather shoes, Albert Park Barracks, Vic., 1973.

Chaetomium indicum Corda

411 Avtur fuel, Army Quality Evaluation, Mascot, NSW., G. Atkins, 1961.

Chaetomium olivaceum Cooke & Ellis

- 622 Lubricating oil, H. Sokol, 1968.
- 717 Cotton duck, Innisfail, Qld., J. Upsher, 1968.

Chaetomium spinosum Chivers

1272 Polyester sealant #5146, Innisfail, Qld., J. Upsher, 1975.

Chaetomium subterraneum Swift & Povah

522 Avtur fuel, AMRL, J. Upsher, 1966.

Chaetomium tortile Bainier

1241 Polyester aircraft sealant, J. Upsher, 1974.

Chloridium Link ex Fries

1658 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1986

Chrysosporium Corda

- 1183 Avtur fuel, Richmond Air Base, NSW., J. Upsher, 1974.
- 1213 Cotton tent fabric, Snake Valley, Vic., P. Jackson, 1973.

Chrysoporium keratinophlium Corda

668 Atmosphere, Innisfail, Qld., J. Upsher, 1967.

Cladosporium Link ex Fries

- 595 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 797 Cotton garments, Malaysia, J. Upsher, 1968.
- 818 Paper label, Innisfail, Qld., J. Upsher, 1969.
- 836 Cotton garments, Malaysia, J. Upsher, 1969.
- 910 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 979 Atmosphere, Innisfail, Qld., J. Upsher, 1970.
- 991 Atmosphere, Innisfail, Qld., J. Upsher, 1970.
- 1021 Atmosphere, Maribyrnong, Vic., J. Upsher, 1970.
- 1042 Copper-chrome-arsenate-treated timber, Innisfail, Qld. (CSIRO trial), J. Upsher, 1970.
- 1109 < AMRL, Innisfail, Old., 1972.
- 1110 < AMRL, Innisfail, Qld., 1972.
- 1113 Polyurethane, Innisfail, Qld., 1972.
- 1114 Polyurethane, Innisfail, Qld., 1972.
- 1115 Polyurethane, Innisfail, Qld., 1972.
- 1116 Polyurethane, Innisfail, Qld., 1972.
- 1117 Polyurethane, Innisfail, Qld., 1972.
- 1118 Polyurethane, Innisfail, Old., 1972.
- 1119 Polyurethane, Innisfail, Qld., 1972.
- 1120 Polyurethane, Innisfail, Qld., 1972.
- 1132 'Mewlon' canvas, Brella Pty. Ltd., Reservoir, Vic., 1973.
- 1253 Spider web on glass-reinforced plastic, Innisfail, Qld., J. Upsher, 1975.
- 1339 Laboratory contaminant, AMRL, 1976.
- 1370 Acrylic paint film, Innisfail, Qld., J. Upsher, 1978.
- 1374 Cotton duck, Innisfail, Qld., J. Upsher, 1978.
- 1375 Cellophane, Innisfail, Qld., J. Upsher, 1978.
- 1376 Alkyd paint, Innisfail, Qld., J. Upsher, 1978.
- 1571 Atmosphere, Innisfail, Old., J. Upsher, 1978.
- 1576 Atmosphere, cleared site, Innisfail, J. Upsher, Qld., 1985.
- 1601 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.
- 1611 Atmosphere, cleared site, Qld., J. Upsher, 1985.
- 1651 Atmosphere, Innisfail, Qld., J. Upsher, 1985.

Cladosporium chlorocephalum (Fresenius) Mason & Ellis.

1390 Cellophane, Innisfail, Qld., J. Upsher, 1979.

Cladosporium cladosporioides (Fresenius) de Vries

- 1216 Laboratory contaminant, AMRL, C. Powell, 1974.
- 1568 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.

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- 1578 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1583 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1598 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1602 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.
- 1662 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.
- 1667 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.

Cladosporium elatum (Harz) Nannfeldt

976 Paper, bottle label, Innisfail, Qld., J. Upsher, 1967.

Cladosporium herbarum (Persoon) Link

- 446 PVC-coated hessian, Innisfail, Qld., L. Lissner, 1964.
- 1335 Azalea leaf, Sunshine, Vic., 1976.

Cladosporium resinae (Lindau) de Vries, see Hormoconis resinae

Cladosporium resinae forma avellaneum de Vries, see Hormoconis resinae

Cladosporium sphaerospermum Penzig

- 805 Paper, Innisfail, Qld., J. Upsher, 1968.
- 1259 Polyester sealant, Innisfail, Qld., J. Upsher, 1975
- 1319 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., J. Upsher, 1985.
- 1567 Atmosphere, Innisfail, Qld., J. Upsher, 1985.
- 1570 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1676 Paint film, Innisfail, Qld., J. Upsher, 1985.

Cochliobolus bicolor Paul & Parbery

1135 Laboratory contaminant, AMRL, P. Jackson, 1973.

Conioscypha Höhnel

1550 Substrate unknown, Innisfail, Qld., J. Upsher, 1985.

Coniothyrum fuckelii Saccardo

- 861 Cotton caravan annex, Bradmill Pty. Ltd., Yarraville, Vic., J. Upsher, 1969. = IMI 147973
- 987 Timber, < CSIRO, Forest Products Div., Clayton, Vic., B. DaCosta, 1970.

Cunninghamella Matruchot

774 Atmosphere, Innisfail, Qld., J. Upsher, 1968.

Curvularia Boedijn

- 768 Atmosphere, Innisfail, Qld., 1968.
- 1143 Sorghum, Kununurra, WA. < WADA, #165, 1973. = IMI 11265.
- 1149 Sorghum, Kununurra, WA. < WADA, #635, 1973.= IMI 13315.
- 1151 *Digitaria* sp., Perth, WA. < WADA, #1346, 1973.= IMI 15028.
- 1155 < IMI 114819, 1973.
- 1189 Soil, Kalgoorlie, WA., 1958 [Mycologia, 57,(2):210. 1965]. < Royal North Shore Hospital, NSW., D. Frey, 1973.

- 1194 White clover, Maitland NSW., 1962.< University of Sydney, #188, P. Valder, 1973.
- 1207 Caterpillar gut, Maribyrnong, Vic., J. Upsher, 1973.
- 1209 Poa sp, NSW, (G. Sansom), P. Jackson, 1973.
- 1211 Cotton-polyester canvas (P6), exposed 2 years, Innisfail, Qld., (C50), P. Jackson, 1973.
- 1235 Rubber (EPDM), "O" ring, Innisfail, Qld., (C59), P. Jackson, 1974.
- 1238 Rubber "O" ring, exposed 18 months, Innisfail, Qld., (C61) P. Jackson, 1974.
- 1239 Cotton duck, Cloncurry, Qld., P. Jackson, (C63), 1974.
- 1263 Polyester sealant #5146, Innisfail, Qld., J. Upsher, 1975.
- 1301 Avtur fuel, Butterworth Air Base, Malaysia, P. Jackson, 1973.
- 1302 Cotton tent fabric, Snake Valley, Vic., (C53), P. Jackson, 1973.
- 1304 Avtur fuel, Butterworth Air Base, Malaysia, (C54), P. Jackson, 1974.
- 1312 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.
- 1314 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.
- 1340 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.
- 1404 Cotton-polyester canvas, Brella Pty. Ltd., Reservoir, Vic., J. Upsher, 1981.
- 1609 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1986

Curvularia affinis Boedijn

- 1085 < IMI 58645, 1972.
- 1162 Sisal rope, (C7), Innisfail, Qld., J. Upsher, 1971.
- Polyethylene rope (R6), exposed 10 months, Innisfail, Qld., (C46), P. Jackson, 1972.
- 1395 Canvas, Innisfail, Qld., J. Upsher, 1980.

Curvularia brachyspora Boedijn

- 1083 Brachyspora dactyla, Perth, WA., < IMI 150289.
- 1188 PVC tape (2K), exposed 2 years, Innisfail, Qld., (C37), T. Keen, 1972.
- 1276 Flax canvas, Cloncurry, Qld., J. Upsher, 1975.

Curvularia cantenulata Reddy & Bilgrami

1175 *Lagerstroemia indica*, Jodhpur, India, Bilgrami and Ranzoni. < IMI 129295. Type strain.

Curvularia clavata Jain

- 1088 *Oryza sativa*, Denmark, S.B. Mathur. < IMI,148186. = ATCC 34596.
- 1142 Sorghum, Kununurra, WA., 1973. < WADA, #164, 1973. = IMI 112637.
- 1192 Soil, DeeWhy, NSW., 1962, < Sydney University #49, P. Valder, 1973.

Curvularia eragrostidis (Hennings) Meyer

- 531 Cotton fabric, Innisfail, Qld., J. Upsher, 1966.
- 806 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 1081 Avtur fuel, Butterworth, Malaysia, (C32), G. McVea, 1972.
- 1092 < IMI 62337, 1972. = ATCC 34597.
- 1140 Sorghum, Kununurra, WA., < WADA, #161, 1973. = IMI 112208.

- 1167 Psalliota basidiocarp, Snake Valley, Vic., P. Jackson, 1973.
- 1168 Cotton-polyester duck (CP8 B1) exposed 4 years, Innisfail, Qld., (C13), J. Upsher, 1972.
- 1172 Sisal rope (R5), exposed 5 months, Innisfail, Qld., (C17), J. Upsher, 1972.
- 1173 Polypropylene rope (R7), exposed 5 months, Innisfail, Qld., (C18), J. Upsher, 1972.
- 1174 Plasticised PVC tape, exposed 1.5 years, Innisfail, Qld., (C19), J. Upsher, 1972.
- 1182 Plasticised PVC tape, Innisfail, Qld., (C29), J. Upsher, 1972.
- 1198 Plasticised PVC tape, exposed 2.5 years, Innisfail, Qld., (C44), J. Upsher, 1973.
- 1210 Canvas duck (P7), exposed 2 years, Innisfail, Qld., P. Jackson, 1973.
- 1262 Polyester sealant, Innisfail, Qld., J. Upsher, 1975.

Curvularia fallax Boedijn

1084 Pothomorphe peltata Trinidad, G.J.Turner, 1960. < IMI 79737. = ATCC 34598.

Curvularia geniculata (Tracy & Earle) Boedijn

1154 < IMI 14819, 1973.

Curvularia harveyi Shipton

1145 Wheat, Miling, WA., H.L. Harvey. < WADA, #227, 1973. = IMI 114257, Type strain.

Curvularia inaequalis (Shear) Boedijn

- 816 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 1091 < IMI 78037a. = ATCC 34597.
- 1203 Laboratory contaminant, (C45), AMRL, 1973.
- 1396 Canvas, Innisfail, Qld., J. Upsher, 1980.

Curvularia intermedia Boedijn

1191 <University of Sydney #47, P. Valder, 1973. = ATCC 12331.

Curvularia lunata (Wakker) Boedijn

- 497 Fuel, AMRL, J. Upsher, 1966.
- 1080 Dieso fuel, (C20), AMRL, 1972.
- 1093 < IMI 77007, 1972. = ATCC 34600
- 1100 Avtur fuel, Lae, Papua-New Guinea, (C27), J. Upsher, 1972.
- 1184 Sisal rope (R5), exposed 8 months, Innisfail, Qld., (C31), P. Jackson, 1972.
- 1190 Laboratory contaminant, 1972.
- 1236 Rubber (neoprene) "O" Rings, Innisfail, Qld., (C60), P. Jackson, 1974.

Curvularia lunata var. aeria Batista, Lima & Vasconcelos

- 1150 Sorghum, Kununurra, WA. < WADA, #617, 1973. = IMI 134356.
- 1152 < IMI 11231, 1973.

Curvularia oryzae Bugnicourt

1089 Oryza sativa, Poona, India, G.W.Dhanda, 1972. < IMI 160069. = ATCC 34601.

Curvularia ovoidea (Hiroe & Watanabe) Muntañola

1222 Timber, < CSIRO, Forest Products Div., Clayton, Vic., B. DaCosta, 1973.

Curvularia pallescens Boedijn

- 650 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 1086 < IMI 62485, 1972.
- 1148 Echinochloa sp., Kununurra, WA., < WA. Dept. Agr. #331 = IMI 11809. 1973.
- 1158 Cotton fabric, Innisfail, Qld., (C3), J. Upsher, 1970.
- Painted metal panel (70E4), exposed 14 months, Innisfail, Qld., J. Upsher, 1971.
- 1264 Polyester sealant, Innisfail, Qld., J. Upsher, 1975.
- 1282 Polyester sealant, Innisfail, Qld., J. Upsher, 1975.

Curvularia penniseti (Mitra) Boedijn

1147 Sorghum, Kununurra, WA. < WADA, # 322, 1983. = IMI 11808.

Curvularia prasadii Mathur & Mathur

- 1082 Avtur fuel, Butterworth, Malaysia, G. McVea, (C33), 1972.
- 1087 Coffea arabica, Kenya, R.M. Nattrass 1958. < IMI 73295, 1972. = ATCC 34602.
- 1101 Avtur fuel, Lae, Papua-New Guinea, (C28), P. Jackson, 1972.
- 1146 Subclover. < WADA, # 315, = IMI 117555, 1973.
- 1177 Substrate unknown, Innisfail, Qld., 1972.
- 1187 Plasticised PVC tape (IKA), exposed 2 years, Innisfail, Qld., (C34), T. Keen, 1972.

Curvularia richardiae Alcorn

1359 Richardia brasiliensis, Peregian Beach, < DPIQ, J. Alcorn 1976. = IMI 276556, type strain.

Curvularia senegalensis (Spegazzini) Subramanian

- 442 PVC-coated hessian, Innisfail, Qld., J. Upsher, 1963.
- 465 Atmosphere, Innisfail, Qld., L. Garrod, 1965.
- 683 Atmosphere, Innisfail, Qld., R. Bird, 1968.
- 685 Atmosphere, Innisfail, Qld., 1968. R. Bird,
- 825 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 1090 < IMI 80285b, 1972.
- 1121 Sisal rope (R6) exposed 10 months, Innisfail, Qld., P. Jackson, 1972.
- 1156 Atmosphere, cleared site, 0830 hrs, (C2), Innisfail, Qld., J. Upsher, 1970.
- 1157 Atmosphere, cleared site, 0830 hrs, (C3), Innisfail, Old., J. Upsher, 1970.
- Nylon fabric after 6 months wet storage in jungle, (C4), Innisfail, Qld., J. Upsher, 1971.
- 1161 Sisal rope (R5), exposed for 2.5 years, (C6), Innisfail, Qld., J. Upsher, 1971.
- Polyethylene rope (R6), exposed for 2.5 years, (C8), Innisfail, Qld., J. Upsher, 1971.
- Polypropylene rope, (R14) exposed for 2.5 years, (C9), Innisfail, Qld., J. Upsher, 1971.
- 1170 Painted (grey) wood panel, exposed 3.5 years, (C15), Innisfail, Qld., J. Upsher, 1972.
- 1171 Cotton-polyester duck (CP11), exposed 5 years, (C16) Innisfail, Qld., J. Upsher, 1972.
- 1178 Cotton fabric, Innisfail, Qld., H. Sokol, 1972
- 1179 Sisal rope (R5), exposed 6 months, Innisfail, Qld., (C24), J. Upsher, 1972.
- 1180 Sisal rope, AMRL, Maribyrnong, Vic., (C25), R. Krolik, 1972.

- 1185 PVC-coated tape (C34), exposed 2 years, Innisfail, Qld., T. Keen, 1972.
- 1220 Timber, Papua-New Guinea, B. DaCosta, < CSIRO #NG209B, 1973.
- 1237 Cotton duck, Cloncurry, Qld., (C62), P. Jackson, 1974.

Curvularia tritici Kumar & Nema

1193 (C42), < University of Sydney, # 66, P. Valder, 1973. = IMI 175441

Curvularia uncinata Bugnicourt

Polychloroprene rubber after 18 months exposure, Innisfail, Qld., C. Powell, 975.

Curvularia verruculosa Tandon & Bilgrami

- 1139 Wheat, Wagga Wagga, NSW. < WADA, #115, 1973.
- 1141 Sorghum, Kununurra, WA. < WADA, #162, 1973. = IMI 11220.
- 1144 Wheat, Nembudding, WA. < WADA, #190, 1973. = IMI 11323.

Dactylaria Saccardo

1592 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.

Dendryphiella Babak & Ranojevic

- 1593 Substrate unknown, Innisfail, Qld., J. Upsher, 1985.
- 1615 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1986.

Didymobotryum Saccardo

1273 Polyester sealant #5106, Innisfail, Qld., J. Upsher, 1975.

Dreschslera australiensis (Bugnicourt) Subramanian & Jain ex Ellis

- 960 Unknown origin, 1970.
- 1295 < Melbourne University, 1975.

Dreschslera papendorfi (van der Aa) Ellis

1153 < IMI 13580, 1973.

Dreschslera spicifera Bainier

1195 Wagga Wagga, NSW. < WADA, # 119, 1973.

Epicoccum nigrum Link

- 975 Laboratory contaminant, AMRL, H. Sokol, 1970.
- 1069 Cotton fabric, AMRL, P. Jackson, 1972.
- 1296 Flax canvas, 2 years exposure, AMRL, C. Powell, 1975.
- 1369 Cotton duck, Innisfail, Qld., C. Powell, 1977.
- 1579 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1693 Water with organochloride contamination, Lake Bonney, SA, J. Upsher, 1993.

Exophiala Carmichael

1547 PVC, Innisfail, Qld., J. Upsher, 1985.

Fusarium Link ex Fries

- 455 Atmosphere, Innisfail, Qld., J. Upsher, 1965.
- 462 Atmosphere, Innisfail, Qld., J. Upsher, 1965.
- 468D Atmosphere, Innisfail, Qld., J. Upsher, 1965.
- 476 Atmosphere, Innisfail, Qld., J. Upsher, 1965.
- 484 Cotton duck, Innisfail, Qld., J. Upsher, 1966.
- 512 Cotton cloth, Innisfail, Qld., J. Upsher, 1967.
- 521 Iris corm, Melbourne, Vic., J. Upsher, 1966.
- 524 Painted wooden test tube rack, AMRL, J. Upsher, 1966.
- 530 Iris corm, Melbourne, Vic., J. Upsher, 1966.
- 532 Cotton fabric, Innisfail, Qld., J. Upsher, 1966.
- 543 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 548 Cotton tent fabric, Bien Hoa, Vietnam, J. Upsher, 1967,
- 628 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 669 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 673 Casting powder, Mulwala, NSW., J. Upsher 1968.
- 676 Corrosion-inhibiting oil, Mirage aircraft, J. Upsher, 1968.
- 690 Avtur fuel, R. Bird, 1968.
- 737 Atmosphere, Cloncurry, Qld., R. Bird, 1968.
- 752 Cellophane in soil, Innisfail, Qld., J. Upsher, 1969.
- 761 Cymbidium backbulb, Melbourne, Vic., J. Upsher, 1969.
- 776 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 782 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 892 Petrol, Melbourne, Vic., H. Sokol, 1969.
- 1023 Diesel fuel sample, AMRL, Maribyrnong, Vic., J. Upsher, 1970.
- 1024 Hydraulic fluid, AMRL, Maribyrnong, Vic., J. Upsher, 1970.
- 1057 Nylon rope on liferaft valise, Beaufort Pty. Ltd., Melbourne, Vic., J. Upsher, 1971.
- 1205 Cactus, Maribyrnong, Vic., C. Powell, 1973.
- 1256 Spiders web on glass-reinforced plastic cylinder, Innisfail, Qld., J.Upsher, 1975.
- 1278 Polychloroprene rubber, Innisfail, Qld., C. Powell, 1975.
- 1281 Polychloroprene rubber, Innisfail, Qld., C. Powell, 1975.
- 1325 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.
- 1408 Cotton-polyester fabric, Brella Pty. Ltd., Reservior, Vic., C. Powell, 1981.
- 1559 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.
- 1694 Starch-conditioned fermentor, AMRL; inoculum from harbour water at Appleton Dock, Vic., J. Upsher 1994

Fusarium nivale Cesati ex Berkeley & Voglino

1072 Coated nylon fabric, Innisfail, Qld., J. Upsher, 1971.

Fusarium oxysporum Schlehtendal

1014 Timber, Innisfail, Qld., J. Upsher, 1970.

Fusarium solani (Martius) Saccardo

1017 Timber, Innisfail, Qld., J. Upsher, 1970.

Fusidium Link

908 Atmosphere, Innisfail, Qld., J. Upsher, 1969.

Geotrichum candidum Link

773 Atmosphere, Innisfail, Qld., J. Upsher, 1968.

Gliocladium Corda

1444 Origin unknown.

Gliomastix Gueguen

1095 Nylon fabric, J. Upsher, 1972.

1353 Life raft valise, HMAS Lonsdale, Vic., J. Upsher, 1985.

Gonatobotryum apiculatum (Peck) Hughes

1061 Atmosphere, Innisfail, Qld., J. Upsher, 1971.

Hansfordia pulvinata (Berkeley & Curtis) Hughes

986 Atmosphere, Innisfail, Qld., J. Upsher, 1970. = IMI 149104

Hansfordia Hughes

1031 Cotton fabric, Innisfail, Qld., J. Upsher, 1970.

Helminthosporium Link & Fries

- 498 Fuel, AMRL, Maribyrnong, Vic., J. Upsher, 1966.
- 549 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 648 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 686 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 1261 Cotton fabric, Innisfail, Qld., P. Jackson, 1974.
- 1287 Flax canvas, Cloncurry, Qld., J. Upsher, 1975.
- 1317 Cotton fabric, Cloncurry, Qld., C. Powell, 1975.
- 1346 Life raft valise, HMAS Lonsdale, C. Powell, 1976.

Hormoconis resinae (Lindau) Arx & de Vries

Anam. Amorphotheca resinae Parbery

Syn. *Cladosporium resinae* (Lindau) de Vries

Cladosporium resinae forma avellaneum de Vries

- 394 Rubber lining of aircraft fuel tank, G. Atkins, 1961.
- 409 Avtur fuel, Richmond, NSW., G. Atkins, 1961.
- 481 Avtur fuel, J. Upsher, 1966.
- 482 Lubricating oil, Richmond, NSW., J. Upsher, 1966.
- 496 Avtur fuel, Sleigh Pty. Ltd., Newcastle, NSW., J. Upsher, 1966.
- 525 Laboratory contaminant, J. Upsher.
- 623 Soil, creosote baiting; Maribyrnong, Vic., R, Bird, 1968.
- 638 Soil, creosote baiting; Maribyrnong, Vic., R. Bird, 1968.
- 723 Fuel, R. Bird, 1968.
- 724 Fuel, R. Bird, 1968.
- 733 Paint panel, R. Bird, 1968.
- 930 Water and fuel oil, RN, Porton Down. Dorset, UK, N.I. Hendey 1961. < IMI 84419, 1969.
- 1026 Lubricant, AMRL, J. Upsher, 1970.
- 1103 Derivative of #394: resistant to ethoxy-ethoxy-ethanol, J. Upsher, 1972.

Humicola Traaen

753 Cellophane in soil, Innisfail, Qld., J. Upsher, 1969.

1011 Timber, Innisfail, Qld., J. Upsher, 1970.

Humicola grisea Traaen

434 PVC-coated hessian, A. Goldie, 1962.

925 < IMI 103008, 1969.

Hyalodendron Diddens

977 Avtur fuel, AMRL, J. Upsher, 1970. = IMI 147975

1016 Avtur fuel, AMRL, H. Sokol, 1970.

1289 Avtur fuel, AMRL, C. Powell, 1975.

Leptodontium elatium (Mangenot) de Hoog

1094 Plasticised PVC, Innisfail, Qld., J. Upsher, 1972.

Leptosphaerulina australis McAlpine

936 Cloncurry, Qld., J. Upsher, 1969.

956 Atmosphere, Innisfail, Qld., J. Upsher, 1969.

1298 Polychloroprene rubber, Innisfail, Qld., C. Powell, 1975.

Lichenophoma Keissler

935 Atmosphere, Innisfail, Qld., J. Upsher, 1969.

Matruchotia varians Boulanger

1053 Atmosphere, Innisfail, Qld., 1972. (Identified, P. Talbot, Waite Agricultural Institute, SA.).

Memnoniella echinata (Rivera) Galloway

2 Canvas, Papua-New Guinea, G. Wade, pre-1944.

508 < IMI 24003, 1960

916 < IMI 61273, 1969.

Monilia sitophila (Montagne) Saccardo

86 Cork gasket, F. Crook, 1947.

Monilinia fruticola (Winter) Honey

1130 Apricot, Melbourne, Vic., T. Keen, 1973.

Monodictys Hughes

1364 Atmosphere, AMRL, C. Powell, 1977.

Mortierella ramanniana (Möller) Linnemann

1058 < Melbourne University, Botany Dept., (H. Swart), 1971.

Mucor Micheli ex Fries

748 Cellophane in soil, Innisfail, Qld., J. Upsher, 1968.

758 Cymbidium, Box Hill, Vic., J. Upsher, 1969.

842 Garments, Malaysia, J. Upsher, 1969.

869 Safety fuses, ICIANZ, Deer Park, Vic., H. Sokol, 1969.

872 Safety fuses, ICIANZ, Deer Park, Vic., H. Sokol, 1969.

1692 Water with organochloride contamination, Lake Bonney, SA, J. Upsher, 1993.

Myrothecium verrucaria (Albertini & Schweinitz) Ditmar & Fresenius

- 460 < CSIRO Dept of Protein Chemistry 1966. = USDA # 1334.2.
- 637 Kanpur, India, V. Agarwal, 1969.
- 938 Atmosphere, Innisfail, Qld., J. Upsher, 1969.

Nigrospora oryzae Hudson

- 1250 Glass-reinforced plastic, Innisfail, Qld., J. Upsher, 1975.
- 1260 Sealant, Innisfail, Qld., J. Upsher, 1975.

Nigrospora panici Zimmerman

997 Atmosphere, Innisfail, Qld. 1970. = IMI 149103

Nigrospora sphaerica (Saccardo) Mason

- 784 Atmosphere, Innisfail, Qld., J. Upsher, 1972.
- 1228 PVC tapes, Innisfail, Qld., C. Powell, 1975.
- 1320 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., 1975.
- 1322 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., 1975.
- 1638 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.

Nodulisporium gregarium (Berkeley & Curtis) Meyer

1104 Sisal rope, Innisfail, Qld., 1972. = IMI 167694.

Oospora roseo-flava Saccardo

493 Cotton fabric, Innisfail, Qld., J. Upsher, 1966.

Paecilomyces Bainier

- 32 Cotton respirator haversack, Papua-New Guinea, G. Wade, pre-1944.
- 479A Atmosphere, Innisfail, Qld., R. Bird, 1965.
- 504 Lubricating oil, AMRL, J. Upsher, 1966.
- 536 Atmosphere, Innisfail, Qld., 1966.
- 556 Leather boot, Vietnam, J. Upsher, 1966.
- 671 Casting powder, Mulwala, NSW., J. Upsher, 1968.
- 772 Atmosphere, Innisfail, Qld., 1968.
- 787 Atmosphere, Innisfail, Qld., 1968,
- 838 Polyurethane-coated garments, Malaysia, J. Upsher, 1969.
- 841 Polyurethane-coated garments, Malaysia, J. Upsher, 1969.
- 940 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 980 Atmosphere, Innisfail, Qld., J. Upsher, 1970.
- 1099 Cotton sample, Innisfail, Qld., J. Upsher, 1972.
- 1252 Spider's web on glass reinforced plastic cylinder, Innisfail, Qld. J. Upsher, 1975
- 1254 Glass reinforced plastic cylinder, Innisfail, Qld., J. Upsher, 1975.
- 1309 Silicone rubber, Innisfail. Qld., C. Powell, 1975.
- 1557 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985
- 1685 Air duct, HMAS Otway, C. Upsher, 1993.
- 1689 Fanblade in galley, HMAS Otway, C. Upsher, 1993.

Paecilomyces burchi Thom

904 Substrate unknown, Cloncurry, Qld., J. Upsher, 1969.

Paecilomyces canadensis (Vuillemin) Brown & Smith

208 'Mushroom spores', G. Atkins, 1957.

Paecilomyces elegans (Corda) Mason & Hughes

- 68 Origin unknown, G. Wade, pre 1944.
- 118 Cotton fabric after soil burial, AMRL, F. Crook, 1949.

Paecilomyces farinosus (Holmskjold) Brown & Smith

- 148 Canvas, Sydney, NSW., R. Hindson, 1958.
- 677 Corrosion-inhibiting oil, RAAF Mirage tanks, J. Upsher, 1968.

Paecilomyces fumoso-raseus (Wise) Brown & Smith

- 356 Infra-red recorder, AMRL, G. Atkins, 1960.
- 517 Fuel sample, AMRL, J. Upsher, 1966.
- 750 Cellophane after soil burial, Innisfail, Qld., R. Bird, 1968.

Paecilomyces lilacinum (Thom) Samson

587 Atmosphere, Innisfail, Qld., J. Upsher, 1966.

Paecilomyces puntonii (Vuillemin) Nannizzi

92 Cotton duck after soil burial, F. Crook, 1948.

Paecilomyces variotii Bainier

Anam. Byssochlamys fulva

- 367 Atmosphere, Lae, Papua-New Guinea, G. Atkins, 1960.
- 413 Avtur fuel, G Atkins, 1961.
- 436 PVC-coated hessian, Wewak, Papua-New Guinea, A. Goldie, 1962. = IMI 362750. Test culture for AS 1157 and AS 1099.
- 500 Avtur fuel, Sleigh Pty. Ltd, Newcastle, NSW., J. Upsher, 1966.
- 501 Avtur fuel, Sleigh Pty. Ltd, Newcastle, NSW., J. Upsher, 1966.
- 526 Leather boot, Vietnam, J. Upsher, 1966.
- 592 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 593 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 594 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 692 < CSIRO Forestry Division, NSW., #101A, 1968.
- 700 Fuse, AMRL, Maribyrnong, Vic., 1968.
- 725 Fuel, AMRL, Maribyrnong, Vic., 1968.
- 875 Drain point in fuel tank (avtur/water), RAAF Hercules, R. Bird, 1969.
- 929 < IMI 108007, 1969.
- 950 Painted wooden trolley, AMRL, J. Upsher, 1969.
- 1357 Procter & Gamble, Cincinnati, OH, USA, < WAR, 1976.

Paecilomyces victoriae (Szilvinyi) Brown & Smith

- 98 Paper label, Papua-New Guinea, H.L.Jensen, 1944.
- 101 Cork gasket, F.Crook, 1946.
- 437 PVC-coated hessian, Wewak, Papua-New Guinea, 1962.
- 448 PVC-coated hessian, Innisfail, Qld., R. Bird, 1964.
- 566 Avtur fuel, AMRL, J. Upsher, 1965.
- 944 Laminated PVC sheet, AMRL, J. Upsher, 1969.

Penicillium Link

- 88 Cotton duck, Lae, Papua-New Guinea, F. Crook, 1946.
- 244 Gladiolus corm, Melbourne, Vic., R. Bird, 1968.
- 302 Paint film, AMRL, G. Atkins, 1958.
- 466A Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 471 Atmosphere, Innisfail, Qld., J. Upsher, 1965.
- 535 Cotton fabric, Innisfail, Qld., J. Upsher, 1966.
- 557 Leather army boot, Vietnam, J. Upsher, 1966.
- 559 Leather army boot, Vietnam, J. Upsher, 1966.
- 560 Fuel, AMRL, J. Upsher, 1965.
- 563 Fuel, AMRL, J. Upsher, 1965.
- 565 Fuel, AMRL, J. Upsher, 1965.
- 573 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 577 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 579 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 582 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 584 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 590 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 601 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 606 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 607 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 611 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 613 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 633 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 653 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 657 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 672 Casting powder, Mulwala, NSW., J. Upsher, 1968.
- 788 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 789 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 808 Crumpet, Wallace Parker Pty. Ltd., J. Upsher, 1969.
- 815 Atmosphere, Innisfail, Qld., 1969.
- 821 Atmosphere, Innisfail, Qld., 1969.
- 844 Garments, Malaysia, J. Upsher, 1969.
- 850 Garments, Malaysia, J. Upsher, 1969.
- 854 Laboratory contaminant, AMRL, H. Sokol, 1969
- 868 Safety fuses, ICIANZ, Vic., H. Sokol, 1969
- 880 Rubber, SA Rubber Pty. Ltd., SA., H. Sokol, 1969
- 881 Rubber, SA Rubber Pty. Ltd., SA., H. Sokol, 1969.
- 939 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 941 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 945 Fruit of 'Finger cherry' Rhodomyrtus macrocarpa, Innisfail, Qld., J. Upsher, 1969.
- 952 Thermal battery, AMRL, 1969.
- 955 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 959 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 964 Painted surface of 'Ikara' missile, J. Upsher, 1970.
- 1050 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1970.
- 1098 Polyurethane foam after soil burial, AMRL, J. Upsher, 1972.
- 1111 Polyurethane sheet, Innisfail, Qld., J. Upsher, 1972.
- 1112 Polyurethane sheet, Innisfail, Qld., J. Upsher, 1972.

- 1133 Canvas, Brella Pty. Ltd., Reservoir, Vic., J. Upsher, 1973.
- 1134 Canvas, Brella Pty, Ltd., Reservoir, Vic., J. Upsher, 1973.
- 1245 Viscose fabric in handbag, Taiwan, C. Powell, 1975.
- 1338 Azalea leaf, Sunshine, Vic., J. Upsher, 1976.
- 1574 Leather, Microtech Pty. Ltd.., Box Hill, Vic., J. Upsher, 1993.
- 1687 Air in wardroom duct, HMAS Otway, C. Upsher, 1993.
- 1690 Air conditioner '10x6' filter, HMAS Otway, C. Upsher, 1993.
- 1695 Water bath with ethylene glycol additive, AMRL. C. Upsher 1994

Penicillium brevi-compactum Dierckx

- 716 Selected from AMRL441, J. Upsher, 1969.
- 550 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 574 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 580 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 588 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 589 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 915 < IMI 17456, 1969.

Penicillium fellutanum Biourge

147 Canvas, Sydney, NSW., G. Atkins, 1957.

Penicillium chermesinum Biourge

570 Atmosphere, Innisfail, Qld., J. Upsher 1966.

Penicillium chrysogenum Thom

- 21 Hessian sandbag, Burnley, Vic., G. Wade, pre-1944
- 121 Soap wrapper, AMRL, F. Crook, 1949.
- 127 Soap wrapper, Adelaide, SA., F. Crook, 1949.
- 887 Atmosphere, Innisfail, Qld., 1969.
- 1068 Wool, RAAF store, Tottenham, Vic., H. Sokol, 1971.

Penicillium citrinum Thom

- 162 Substrate unknown, Manus Island, Papua-New Guinea, G. Atkins, 1956.
- 176 Orange skin, G. Atkins, 1956.
- 229 Bean seed, Melbourne, Vic., R. Bird, 1968.
- 240 Cotton tent, Copper-rotproofed, Port Fairy, Vic., G. Atkins, 1957.
- 585 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 586 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 596 < IMI 156871
- 703 Fuse, R. Bird, 1968.
- 719 Polyurethane-coated nylon mattress cover, Malaysia, R. Bird, 1968.
- 969 Atmosphere, Innisfail, Qld., J. Upsher, 1969. = IMI 156875

Penicillium corylophilum Dierckx

- 534 Leather boot, Vietnam, J. Upsher, 1966.
- 893 Waxed cardboard ration box, J. Upsher, 1969.
- 1059 Paper, Melbourne, Vic., 1973. = IMI 175439. Test culture for AS 1157.
- 1137 < Melbourne University, 1973. = IMI 175440.

DSTO-GD-0054

Penicillium cyclopium Westling

- 441 < CSIRO Protein Research Laboratory, 1963.
- 926 < IMI 19759, 1969.

Penicillium decumbens Thom

- 140 Leather binocular case, Manus Island, Papua-New Guinea, R. Hindson, 1952.
- 472 Substrate unknown, Innisfail, Qld., R. Bird, 1965.
- 569 Fuel, AMRL, Maribyrnong, Vic., J. Upsher, 1965.
- 802 Cellophane after soil burial, Innisfail, Qld., J. Upsher, 1968.
- 810 Waxed cardboard ration box, J. Upsher, 1969.

Penicillium digitatum Saccardo

1127 Orange skin, AMRL, J. Upsher, 1972.

Penicillium duclauxi Delacroix

765 Atmosphere, Innisfail, Qld., J. Upsher 1968.

Penicillium expansum Link ex Gray

1214 Apple, AMRL, J. Upsher, 1973.

Penicillium frequentans Westling

- 489 Polyporus basidiocarp, Maribyrnong, Vic., J. Upsher, 1966.
- 533 Leather boot, Vietnam, J. Upsher, 1966.
- 572 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 953 Atmosphere, Innisfail, Qld., J. Upsher, 1969.

Penicillium funiculosum Thom

- 309 Agar plate with tin oxide (atmospheric contaminant), AMRL, G.Atkins, 1958. Test culture for AS 1099.
- 467B Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 537 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 790 Atmosphere, Innisfail, Qld., J. Upsher, 1966.

Penicillium godlewskii Zaleski

553 Leather army boot, Vietnam, J. Upsher, 1966.

Penicillium herquei Bainier & Sartory

1336 Explosives container, AMRL, C. Powell, 1976.

Penicillium janthinellum Biourge

- 35 Respirator, Sydney, NSW., G. Wade, pre-1944.
- 691 < CSIRO, 1968. Test culture for AS 1157.
- 721 Oxalic acid solution 1%, AMRL, J. Upsher, 1968.
- 921 < IMI 108033, 1969.

Penicillium javanicum Beyma

932 Laboratory contaminant, AMRL, H. Sokol, 1969.

Penicillium jenseni Zalesky

- 509 Paint film, AMRL, J. Upsher, 1966.
- 604 Atmosphere, Innisfail, Qld., J. Upsher, 1967.

Penicillium lanosum Westling

297 Mint jelly, G. Atkins, 1958.

Penicillium luteum Sopp

- 467A Atmosphere, Innisfail, Qld., J. Upsher, 1965.
- Leather army boot, Vietnam, J. Upsher, 1966.
- 764 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 812 Waxed cardboard ration box, J. Upsher, 1969.
- 895 Waxed cardboard ration box, J. Upsher, 1969.
- 927 < IMI 95152, 1969.
- 1007 Timber, Innisfail, Qld., J. Upsher, 1970.
- 1049 Flax canvas valise for inflatable liferaft, RAN, J. Upsher, 1970.
- 1202 Leather shoe, Albert Park Barracks, Melbourne, Vic., C. Powell, 1973.
- 1358 Cardboard, Procter & Gamble, Cincinatti, OH., USA, < WAR, 1976.

Penicillium ochrochloron Biourge

1075 Inner wall of 30° incubator, AMRL, H. Sokol, 1971. Test culture for AS 1099.

Penicillium oxalicum Currie & Thom

- 52 Cotton canvas, Papua-New Guinea, G. Wade, pre-1944.
- 456 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 562 Fuel, AMRL, Maribyrnong, Vic., J. Upsher, 1967.

Penicillium purpurogenum Stoll

84 < University of Melbourne, Botany Dept., E. MacLennan, 1948.

Penicillium raistrickii Smith

222 Atmosphere, AMRL, G. Atkins, 1957.

Penicillium roqueforti Thom

- 186 Cheese, Kraft Walker Co., G. Atkins, 1956.
- 423 Cheese, A. Goldie, 1961.
- 506 Adhesive/polystyrene, Sydney, NSW., 1966.
- 704 Laboratory contaminant, AMRL, R. Bird, 1968.

Penicillium rubrum Sopp

1122 Packaging for Army shirt after 5 years storage (Army), B. Hoskin, 1972.

Penicillium sclerotiorum Beyma

- 578 Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 608 Atmosphere, Innisfail, Qld., J. Upsher, 1967.

Penicillium simplicissimum (Oudemans)Thom

583 Atmosphere, Innisfail, Qld., J. Upsher, 1966.

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Penicillium variabile Sopp

- 894 Press board carton, J. Upsher, 1969.
- 996 Prune, Maribyrnong, Vic., J. Upsher, 1970.

Penicillium vermiculatum Danegeard

160 Laboratory culture, G. Atkins, 1956.

Penicillium verruculosum Peyronel

907 Waxed cardboard ration box, J. Upsher, 1969.

Periconia Tode ex Fries

- 689 Paint panel, Panama, R. Bird, 1969.
- 888 Atmosphere, Innisfail, Qld., R. Bird, 1969.
- 1305 Polychloroprene rubber, Innisfail, Qld., C. Powell, 1975.
- 1306 Silicone rubber, Innisfail, Qld., C. Powell, 1975.

Periconia atropurpurea (Berkeley & Curtis) Litvinov

856 Atmosphere, Innisfail, Qld., J. Upsher, 1969. = IMI 147977

Periconia hispidula (Persoon ex Persoon) Mason & M.B. Ellis.

- 678 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 681 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1967.
- 777 Atmosphere, Innisfail, Qld., J. Upsher, 1968.
- 779 Atmosphere, Innisfail, Qld., J. Upsher, 1968.

Periconiella echinocloae (Batista) M.B. Ellis

- 899 Atmosphere, Cloncurry, Qld., J. Upsher, 1969.
- 1637 Atmosphere, jungle. Innisfail, Qld., J. Upsher, 1985.

Pestalotia de Notaris

- 827 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 852 Garments, Malaysia, J. Upsher, 1969.
- 1331 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld.,J. Upsher, 1976.
- 1398 Plasticised PVC, Innisfail, Qld., C. Powell, 1980.

Pestalotia hordeidestrua Denhardt

1249 Glass fibre reinforced plastic cylinder, 2 years exposure, Innisfail, Qld., J. Upsher, 1975.

Phialophora Medlar

- 675 Corrosion-inhibiting oil, Mirage fuel tank, J. Upsher, 1968.
- 693 < CSIRO Division of Forest Products, B. DaCosta, 1968.
- 736 Atmosphere, Innisfail, Qld., R. Bird, 1968.
- 843 Garments, Malaysia, R. Bird, 1969.
- 876 Californian redwood slat, Abermain, Qld., J. Upsher, 1969.
- 877 Californian redwood slat, Abermain, Qld., J. Upsher, 1969.
- 942 Atmosphere, Innisfail, Qld., J. Upsher, 1969.
- 1051 Life raft fabric, ex RAN, C. Powell, 1970.
- 1221 Timber, New Guinea, < CSIRO #NG48, B. DaCosta, 1973.
- 1299 PVC tape, Innisfail, Qld, Australia, C. Powell, 1975.

Phialophorophoma Linder

933 Substrate unknown, Cloncurry, Qld., J. Upsher, 1969.

Phoma eupyrena Saccardo

- 983 Atmosphere, Innisfail, Qld., C. Powell, 1970. = IMI 147982
- 1043 Timber, Innisfail, Qld., CSIRO Trial, H. Sokol, 1970.
- 1096 Cotton samples, Innisfail, Qld., C. Powell 1972.

Phoma Saccardo

- 651 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 735 Plate exposure, Cloncurry, Qld., R. Bird, 1968.
- 1277 Flax canvas, Cloncurry, Qld., J. Upsher, 1975.
- 1283 Sealant, Innisfail, Qld., J. Upsher, 1975.
- 1286 Polychloroprene rubber, Innisfail, Qld., 1975.
- 1308 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.
- 1313 Silicone rubbers, Innisfail, Qld., C. Powell, 1975.
- 1333 Polychloroprene rubber, Qld., C. Powell, 1978
- 1351 Life raft valise, HMAS Lonsdale, C. Powell, 1976.

Piptocephalis de Bary

1431 < University of Melbourne, Botany Dept., H. Swart.

Pithomyces Berkley & Broome

- 640 Atmosphere, Innisfail, Qld, Australia, J. Upsher, 1967.
- 663 Atmosphere, Innisfail, Qld, Australia, J. Upsher, 1967.
- 845 Garments, Malaysia, J. Upsher, 1969.
- 994 Atmosphere, Innisfail, Qld., J. Upsher, 1970.
- 1218 Timber, Papua-New Guinea, < CSIRO, Forest Products Div., #NG122, B. DaCosta, 1973.
- 1225 Timber, Papua-New Guinea, < CSIRO, Forest Products Div., #NG121, B. DaCosta, 1973.
- 1229 Rubber "O" Rings, Innisfail, Qld., P. Jackson, 1974.
- 1231 Rubber "O" Rings, Innisfail, Qld., P. Jackson, 1974.
- 1232 Rubber "O" Rings, Innisfail, Qld., P. Jackson, 1974.
- 1233 Rubber "O" Rings, Innisfail, Qld., P. Jackson, 1974.
- 1280 Polychloroprene rubber, Innisfail, Qld., 1975.
- 1310 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.
- 1527 Atmosphere, Innisfail, Qld., J. Upsher, 1985.

Pithomyces chartarum (Berkeley & Curtis) Ellis

1036 Wood chips, Papua-New Guinea. < CSIRO Forest Products Div., #NG44, B. Dacosta, 1970.

Pithomyces sacchari (Spegazzini) Ellis

1274 Flax canvas, Cloncurry, Qld, Australia, J. Upsher, 1975.

Pseudallescheria boydii (Shear) McGinnis, Padhye & Ajello

914 Railway diesel fuel, Melbourne, Vic., J. Upsher, 1969. = IMI 147974

Pyricularia Saccardo

1504 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.

Ramichloridium Stahel

- 1429 Substrate unknown, Innisfail, Qld.
- 1545 Substrate unknown, Innisfail, Qld., J. Upsher, 1985.
- 1556 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.
- 1617 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.
- 1668 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.

Ramichloridium schulzeri (Saccardo) de Hoog

1668 Timber in soil, Innisfail, Qld. < W Hoskins, 1986

Ramichloridium subulatum de Hoog

1440 Substrate unknown, Innisfail, Qld.

Rhinocladiella. Nannfeldt

- 616 Atmosphere, Innisfail, Qld., 1967.
- 732 Atmosphere, Innisfail, Qld., 1968.
- 974 Avtur fuel, 1969.
- 1071 Cotton polyester fabric, jungle, Innisfail, Qld., J. Upsher, 1971.
- 1206 Thymol solution, CSIRO, Div. Prot. Chem., P. Hoyne, 1973.
- 1219 Timber, < CSIRO, Forest Products Div., B. DaCosta, 1973.
- 1255 Glass fibre-reinforced plastic cylinder, exposed 2 years, cleared site, Innisfail, Qld., J. Upsher, 1975.
- 1284 Sealant, Innisfail, Qld., J. Upsher, 1975.
- 1337 PVC tape, Innisfail, Qld., P. Jackson, 1976.
- 1342 Explosive sample, AMRL, J. Upsher, 1976.
- 1349 Life raft valise, HMAS Lonsdale, J. Upsher, 1976.
- 1400 PVC, containing fungicide, Innisfail, Qld, Australia, J. Upsher, 1981.
- 1501 Atmosphere, cleared site, Innisfail, Qld., J.Upsher, 1985.
- 1551 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1569 Atmosphere, Innisfail, Qld., J. Upsher, 1985.

Rhizopus stolonifer (Ehrenberg ex Fries) Lind

14 Radio, Papua-New Guinea, pre-1944. = IMI 12162.

Sclerotium Tode ex Fries

- 1269 Iris corm, Newport, Vic., 1975.
- 1446 Unknown origin.

Scolecobasidium Abbot

- 982 Atmosphere, Innisfail, Qld. = IMI 147981.
- 1067 < IMI, 1971.

Scolecobasidium constrictum Abbot

1131 Cotton fabric, Davies Coop Pty. Ltd., J. Upsher 1973.

Scopulariopsis Bainier

- 464 Atmosphere, Innisfail, Qld., R. Bird, 1965.
- 625 Atmosphere, Innisfail, Qld., J. Upsher, 1967.
- 1512 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1564 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.

Scopulariopsis brevicaulis (Saccardo) Bainier

- 1414 < ATCC, 1983. Test culture for AS 1099.
- 1675 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.
- 1691 Woollen mattress cover, HMAS Otway, C. Upsher, 1993.

Scytalidium Pesante

1044 Timber, Innisfail, Qld., (CSIRO Trial), H. Sokol, 1970.

Septonema Corda

1544 Substrate unknown, Innisfail, Old.

Septonema secedens Corda

1519 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985.

Spegazzina lobulata Thrower

1293 Soil, Frankston heathland, < University of Melbourne #S2:001, 1975.

Sporothrix Hektoen & Perkins

- 1380 Acrylic paint, Innisfail, Qld., J. Upsher, 1978.
- 1516 Atmosphere, cleared site, Innisfail, Qld., J. Upsher, 1985.

Sporotrichum Link

- 1076 Laboratory contaminant, J. Upsher, 1971.
- 1679 Unknown origin, J. Upsher, 1985.

Stachybotrys Corda

- 1025 Putty stored under water, J. Upsher, 1970.
- 1328 Carpet, Maribyrnong, Vic., 1975.
- 1350 Life raft valise, HMAS Lonsdale, 1976.

Stachybotrys atra

syn. Stackybotrys chartarum

Stachybotrys chartarum (Ehrenberg) Hughes

- 1A Hessian sandbag, Burnley, Vic., G. Wade, pre-1944.
- 1B Hessian sandbag, Burnley, Vic., G. Wade, pre-1944. Hyaline strain of 1A.
- 66 Cotton bag, Ballarat, Vic., G. Wade, pre-1944.
- 507 < CSIRO, Div. Protein Chemistry, M Jermyn, 1966
- 918 < IMI 82021, 1969.
- 1416 < ATCC, 1983

Stemphylium Wallroth

- 858 Caravan annex, Bradmill PL., Vic, Australia, 1969.
- 859 Caravan annex, Bradmill, PL., Vic, Australia, 1969.
- 1129 Hair, T. Keen, 1973.
- 1330 Laboratory contaminant, AMRL, J. Upsher, 1976.

Stephanosporium cereale (Thüm) Swart

1389 Life raft fabric, J. Upsher, 1984.

Stigmina Saccardo

820 Atmosphere, Innisfail, Qld., J. Upsher, 1969.

Syncephalastrum Schröter

- 814 Waxed cardboard ration box, J. Upsher, 1969.
- 1327 Cotton fabric treated with pentachlorphenyl laurate, Innisfail, Qld., C. Powell, 1975.

Syncephalastrum racemosum Cohn ex Schröter

- 399 Lining of fuel tank, Sydney, NSW., G. Atkins, 1961.
- 427 PVC-coated hessian, Papua-New Guinea, A. Goldie, 1961. = IMI 362748. AS 1157 test culture.
- 924 < IMI 77605, 1969.

Torula Persoon ex Fries

1307 'Sample PD2', Innisfail, Qld., J. Upsher, 1975.

Torula caligans (Batista & Upadhyay) Ellis

1292 Mangrove soil, Mozambique. < University of Melbourne #66:42, H Swart, 1975.

Trichoderma Persoon ex Fries

- 468C Atmosphere, Innisfail, Qld., J. Upsher, 1966.
- 1047 Flax canvas life raft valise, RAN, 1970.
- 1326 Carpet, Maribyrnong, Vic., C. Powell, 1975.

Trichoderma viride Persoon ex.Fries

- 447 PVC-coated hessian, Innisfail, Qld., R. Bird, 1968.
- 470 Atmosphere, Innisfail, Qld., J. Upsher, 1965.
- 480 Laboratory contaminant, AMRL. 1965. Test culture for AS 1099.
- 520 Wood, Maribyrnong, Vic., J. Upsher, 1966.
- 558 Atmosphere, Innisfail, Qld., J. Upsher, 1964.
- 718 Cotton duck, R. Bird, 1968.
- 922 < IMI 45553, 1969.
- 1354 Cardboard, Procter & Gamble, Cincinnati, OH., USA, < WAR, 1976.

Trichothecium Link

516 Atmosphere, AMRL, Maribyrnong, Vic., J Upsher, 1966.

Trichothecium roseum Link ex Fries

- 527 Inflatable rubber life raft, J. Upsher, 1966
- 896 Press board rations carton, J. Upsher, 1969.

Trimmatostroma Corda

- 105 Flax water bag, AMRL, BAS., 1949.
- 122 Jute water bag, AMRL, BAS., 1949.
- 515 Atmosphere, AMRL, J. Upsher, 1966.

Trimmatostroma salicis Corda

Fibreglass-reinforced plastic cylinder, cleared site, 2 years exposure, Innisfail, Qld., J. Upsher, 1975.

Tritirachum roseum MacLeod

- 1070 Flame thrower harness, made in USA, via Vietnam, J. Upsher, 1971.
- 1344 Life raft valise, HMAS Lonsdale, Vic., J. Upsher, 1976.

Ulocladium Preuss

- 886 < Paint Industry Research Association, UK, 1969. (Evans & Levinson. Int. Biodet. Bull., 4 (2): 89-92. 1968).
- 891 < Paint Industry Research Association, UK, 1969. (Evans & Levinson. Int. Biodet. Bull., 4 (2): 89-92. 1968).
- 1334 Laboratory contaminant, AMRL, C. Powell, 1976.
- 1566 Hessian, Maribyrnong, Vic., J. Upsher, 1985.
- 1670 Hessian, Maribyrnong, Vic., J. Upsher, 1985. Benomyl tolerant.

Ulocladium alternariae (Cooke) Simmons

1054 Life raft canvas valise, Beaufort Pty. Ltd., Vic., J. Upsher, 1971.

Ulocladium atrum Preuss

- 1045 Timber, Innisfail, Qld., (CSIRO trial), 1970.
- 1073 Painted wall, Ascot Vale, Vic., P. Jackson ,1971.
- 1125 Cotton fabric, Nylex Pty. Ltd., Mentone, Vic., 1972.

Ulocladium chartarum (Preuss) Simmons

1138 < IMI, 1974. Obtained as Stemphylium sp.

Ulocladium consortiale (Thüm) Simmons

984 Timber, Innisfail, Qld., < NSW. Div of Forest Products, #80, 1970. Test culture for AS 1157.

Veronaea Ciferri & Montemartini

1521 Atmosphere, jungle, Innisfail, Qld., J. Upsher, 1985

Veronaea botryosa Ciferri & Montemartini

898 Atmosphere, Innisfail, Qld., R. Bird, 1969. = IMI 147978.

Verticillium psalliotae Treschow

785 Atmosphere, Innisfail, Old., J. Upsher, 1972. = IMI 149106.

5. Numerical List of Cultures

0001 4	0. 1 1 . 1 .	0140	Penicillium decumbens
0001A	Stachybotrys chartarum		
0001B	Stachybotrys chartarum Memnoniella echinata	0143 0147	Aspergillus penicilloides Penicillium fellutanum
0002		0147	
0004	Aspergillus niger		Paecilomyces farinosus Penicillium vermiculatum
0005	Aspergillus flavus	0160	Penicillium citrinum
0014	Rhizopus stolonifer	0162	
0021	Penicillium chrysogenum	0164	Aspergillus versicolor
0024	Chaetomium globosum	0172	Aspergillus terreus
0032	Paecilomyces sp.	0176	Penicillium citrinum
0035	Penicillium janthinellum	0177	Aspergillus wentii
0046	Aspergillus glaucus	0179	Aspergillus ustus
0052	Penicillium oxalicum	0186	Penicillium roqueforti
0058	Aspergillus niger	0189	Aspergillus quercinus
0059	Aspergillus sulphureus	0193	Aspergillus carneus
0059	Aspergillus sulphureus	0194	Aspergillus flavipes
0060	Aspergillus candidus	0196	Aspergillus luchuensis
0065	Aspergillus repens	0208	Paecilomyces canadensis
0066	Stachybotrys chartarum	0214	Aspergillus proliferans
0068	Paecilomyces elegans	0219	Aspergillus carneus
0072	Aspergillus niger	0222	Penicillium raistrickii
0074	Chaetomium globosum	0229	Penicillium citrinum
0079	Alternaria alternata	0233	Aspergillus phoenicus
0084	Penicillium purpurogenum	0240	Penicillium citrinum
0085	Aspergillus oryzae	0244	Penicillium sp.
0086	Monilia sitophila	0248	Aspergillus niger
0088	Penicillium sp.	0250	Paecilomyces sp.
0090	Aspergillus fumigatus	0252	Aspergillus niger
0091	Aspergillus ustus	0255	Aspergillus niger
0092	Paecilomyces puntonii	0268	Aspergillus terreus var. aureus
0098	Paecilomyces victoriae	0281	Aspergillus sp.
0101	Paecilomyces victoriae	0297	Penicillium lanosum
0103	Aspergillus repens	0302	Penicillium sp.
0105	Trimmatostroma sp.	0309	Penicillium funiculosum
0108	Aspergillus chevalieri	0356	Paecilomyces fumoso-roseus
0110	Cephaliophora tropica	0366	Byssochlamys fulva
0118	Paecilomyces elegans	0367	Paecilomyces varioti
0121	Penicillium chrysogenum	0368	Aspergillus terreus
0122	Trimmatostroma sp.	0374	Aspergillus sydowi
0127	Penicillium chrysogenum	0384	Aspergillus chevalieri
0129	Aspergillus oryzae	0394	Hormoconis resinae
0132	Aspergillus niger	0399	Syncephalastrum racemosum
0133	Aspergillus flavus	0409	Hormoconis resinae
0135	Aspergillus niger	0407	Chaetomium indicum
0133	Aspergillus flavus	0411	Paecilomyces varioti
0137	raperguius navus	0413	r aechomyces variou

0423	Ponicillium requesemble	0402	0
0425	Penicillium roqueforti Aspergillus amstelodami	0493	Oospora rosea-flava
0427	Syncephalastrum racemosum	0496	Hormoconis resinae
0428	Aspergillus niger	0497 0498	Curvularia lunata
0429	Aspergillus flavus	0500	Helminthosporium sp.
0430	Aspergillus tamarii	0500	Paecilomyces varioti
0431B	Aspergillus sp.		Paecilomyces varioti
0434	Humicola grisea	0504 0506	Paecilomyces sp.
0435	Aspergillus ustus	0507	Penicillium roqueforti
0436	Paecilomyces varioti		Stachybotrys chartarum
0437	Paecilomyces victoriae	0508	Stachybotrys echinata
0438	Aspergillus glaucus	0509	Penicillium jenseni
0439	Aspergillus fisheri var. spinosus	0512	Fusarium sp.
0440	Penicillium chrysogenum	0515	Trimmatostroma sp.
0441	Penicillium cyclopium	0516	Trichothecium sp.
0442		0517	Paecilomyces fumoso-roseus
0442	Curvularia senegalensis	0519	Aspergillus awamori
0445	Aspergillus tamarii	0520	Trichoderma viride
0445	Aspergillus versicolor	0521	Fusarium sp.
	Cladosporium herbarum	0522	Chaetomium subterraneum
0447	Trichoderma viride	0523	Alternaria radicina
0448	Paecilomyces victoriae	0524	Fusarium sp.
0450	Alternaria sp.	0525	Hormoconis resinae
0454	Aureobasidium pullulans	0526	Paecilomyces varioti
0455	Fusarium sp.	0527	Cephalothecium roseum
0456	Penicillium oxalicum	0530	Fusarium sp.
0460	Myrothecium verrucaria	0531	Curvularia eragrostidis
0462	Fusarium sp.	0532	Fusarium sp.
0464	Scopulariopsis sp.	0533	Penicillium frequentans
0465	Curvularia senegalensis	0534	Penicillium corylophilum
0466A	Penicillium sp.	0535	Penicillium sp.
0467B	Penicillium funiculosum	0536	Paecilomyces sp.
0467A	Penicillium luteum	0537	Penicillium funiculosum
0468A	Aspergillus flavus	0542	Aureobasidium pullulans
0468D	Fusarium sp.	0543	Fusarium sp.
0468C	Trichoderma sp.	0545	Aspergillus flavus
0469	Aspergillus foetidus	0546	Aspergillus terreus
0470	Trichoderma viride	0548	Fusarium sp.
0471	Penicillium sp.	0549	Helminthosporium sp.
0472B	Penicillium decumbens	0550	Penicillium brevi-compactum
0475	Aspergillus granulosus	0553	Penicillium godlewskii
0476	Fusarium sp.	0554	Penicillium luteum
0479	Aspergillus fumigatus	0556	Paecilomyces sp.
0479A	Paecilomyces sp.	0557	Penicillium sp.
0480	Trichoderma viride	0558	Trichoderma viride
0481	Hormoconis resinae	0559	Penicillium sp.
0482	Hormoconis resinae	0560	Penicillium sp.
0484	Fusarium sp.	0561	Aspergillus niger
0488	Aureobasidium pullulans	0562	Penicillium oxalicum
0489	Penicillium frequentans	0563	Penicillium sp.

0564	Arthrinium phaeospermum	0651	Phoma sp.
0565	Penicillium sp.	0653	Penicillium sp.
0566	Paecilomyces victoriae	0657	Penicillium sp.
0569	Penicillium decumbens	0663	Pithomyces sp.
0570	Penicillium chermesinum	0668	Chrysoporium keratinophilum
0572	Penicillium frequentans	0669	Fusarium sp.
0573	Penicillium sp.	0671	Paecilomyces sp.
0574	Penicillium brevi-compactum	0672	Penicillium sp.
0577	Penicillium sp.	0673	Fusarium sp.
0578	Penicillium sclerotiorum	0675	Phialophora sp.
0579	Penicillium sp.	0676	Fusarium sp.
0580	Penicillium brevi-compactum	0677	Paecilomyces farinosus
0582	Penicillium sp.	0678	Periconia hispidula
0583	Penicillium simplicissimum	0681	Periconia hispidula
0584	Penicillium sp.	0683	Curvularia senegalensis
0585	Penicillium citrinum	0684	Bipolaris sp.
0586	Penicillium citrinum	0685	Curvularia senegalensis
0587	Paecilomyces lilacinus	0686	Helminthosporium sp.
0588	Penicillium brevi-compactum	0689	Periconia sp.
0589	Penicillium brevi-compactum	0690	Fusarium sp.
0590	Penicillium sp.	0691	Penicillium janthinellum
0591	Aspergillus sydowi	0692	Paecilomyces varioti
0592	Paecilomyces varioti	0693	Phialophora sp.
0593	Paecilomyces varioti	0700	Paecilomyces varioti
0594	Paecilomyces varioti	0701	Aspergillus tamarii
0595	Cladosporium sp.	0701	Aspergillus sp.
0596	Penicillium citrinum	0703	Penicillium citrinum
0598	Aspergillus ornatus	0703	Penicillium roqueforti
0601	Penicillium sp.	0709	Aspergillus candidus
0604	Penicillium jenseni	0713	Aspergillus sydowi
0604	Penicillium sp.	0716	Penicillium brevi-compactum
0607	•	0717	Chaetomium olivaceum
	Penicillium sp.	0717	
0608	Penicillium sclerotiorum		Trichoderma lignorum
0611	Penicillium sp.	0719	Penicillium citrinum
0613	Penicillium sp.	0720	Aspergillus fumigatus
0616	Rhinocladiella sp.	0721	Penicillium janthinellum
0622	Chaetomium olivaceum	0723	Hormoconis resinae
0623	Hormoconis resinae	0724	Hormoconis resinae
0625	Scopulariopsis sp.	0732	Rhinocladiella sp.
0628	Fusarium sp.	0733	Hormoconis resinae
0633	Penicillium sp.	0735	Paecilomyces varioti
0634	Aspergillus sp.	0735	Phoma sp.
0635	Chaetomium globosum	0736	Phialophora sp.
0637	Myrothecium verrucaria	0737	Fusarium sp.
0638	Cladosporium resinae	0740	Aureobasidium pullulans
0640	Pithomyces sp.	0746	Aspergillus terreus
0648	Helminthosporium sp.	0748	Mucor sp.
0649	Alternaria sp.	0749	Aspergillus restrictus
0650	Curvularia pallescens	0750	Paecilomyces fumoso-roseus

0750	T	0044	
0752	Fusarium sp.	0841	Paecilomyces sp.
0753	Humicola sp.	0842	Mucor sp.
0756	Aspergillus fumigatus	0843	Phialophora sp.
0757	Aspergillus terreus	0844	Penicillium sp.
0758	Mucor sp.	0845	Pithomyces sp.
0759	Aspergillus fumigatus	0846	Chaetomium sp.
0760	Aspergillus niger	0850	Penicillium sp.
0761	Fusarium sp.	0852	Pestolotia sp.
0764	Penicillium luteum	0853	Alysidium sp.
0765	Penicillium duclauxi	0854	Penicillium sp.
0768	Curvularia sp.	0855	Aspergillus ornatus
0771	Aspergillus sp.	0856	Periconia atropurpurea
0772	Paecilomyces sp.	0858	Stemphylium sp.
0773	Geotrichum sp.	0859	Stemphylium sp.
0774	Cunninghamella sp.	0860	Alternaria sp.
0776	Fusarium sp.	0861	Coniothyrium fuckelii
0777	Periconia hispidula	0862	Chaetomium bostrychodes
0779	Periconia hispidula	0864	Chaetomium sp.
0782	Fusarium sp.	0868	Penicillium sp.
0784	Nigrospora sphaerica	0869	Mucor sp.
0785	Verticillium psalliotae	0870	Aspergillus niger
0787	Paecilomyces sp.	0871	Aspergillus flavus
0788	Penicillium sp.	0872	Mucor sp.
0789	Penicillium sp.	0873	Chaetomium sp.
0790	Penicillium funiculosum	0874	Chaetomium sp.
0797	Cladosporium sp.	0875	Paecilomyces varioti
0798	Chaetomium globosum	0876	Phialophora sp.
0802	Penicillium decumbens	0877	Phialophora sp.
0805	Cladosporium sphaerospermum	0879	Aspergillus niger
0806	Curvularia eragrostidis	0880	Penicillium sp.
0807	Aspergillus terricola	0881	Penicillium sp.
0808	Penicillium sp.	0882	Aspergillus candidus
0809	Aspergillus flavus	0883	Aspergillus sp.
0810	Penicillium decumbens	0886	Ulocladium sp.
0811	Aspergillus phoenicus	0887	Penicillium chrysogenum
0812	Penicillium luteum	0888	Periconia sp.
0813	Aspergillus fischeri	0891	Ulocladium sp.
0814	Syncephalastrum sp.	0892	Fusarium sp.
0815	Penicillium sp.	0893	Penicillium corylophilum
0816	Curvularia inequalis	0894	Penicillium variabile
0818	Cladosporium sp.	0895	Penicillium luteum
0820	Stigmina sp.	0896	Trichothecium roseum
0821	Penicillium sp.	0897	
0823	Arthrinium sacchari	0898	Byssochlamys fulva
0825	Curvularia senegalensis	0899	Veronaea botryosa
0827	Pestalotia sp.		Periconiella echinocloae
0836	Cladosporium sp.	0901	Cladosporium sp.
0838		0904	Paecilomyces burci
0840	Paecilomyces sp.	0907	Penicillium verruculosum
0040	Alternaria sp.	0908	Fusidium sp.

0914	Pseudallescheria boydii	0983	Phoma eupyrena
0915	Penicillium brevi-compactum	0984	Ulocladium consortiale
0916	Memnoniella echinata	0986	Hansfordia pulvinata
0917	Chaetomium globosum	0987	Coniothyrium fuckelii
0918	Stachybotrys chartarum	0991	Cladosporium sp.
0920	Aspergillus niger	0992	Aspergillus terreus
0921	Penicillium janthinellum	0993	Aspergillus sp.
0922	Trichoderma viride	0994	Pithomyces sp.
0923	Aspergillus flavus	0996	Penicillium variabile
0924	Syncephalastrum racemosum	0997	Nigrospora panici
0925	Humicola grisea	1007	Penicillium luteum
0926	Penicillium cyclopium	1009	Aspergillus japonicus
0927	Penicillium luteum	1010	Aspergillus heteromorphus
0928	Alysidium sp.	1011	Humicola sp.
0929	Paecilomyces varioti	1013	Alternaria sp.
0930	Hormoconis resinae	1014	Fusarium oxysporum
0931	Aspergillus versicolor	1015	Cephalosporium sp.
0932	Penicillium javanicum	1016	Hyalodendron sp.
0933	Phialophorophoma sp.	1017	Fusarium solani
0935	Lichenophoma sp.	1020	Aureobasidium pullulans
0936	Leptosphaerulina australis	1021	Cladosporium sp.
0938	Myrothecium verrucaria	1023	Fusarium sp.
0939	Penicillium sp.	1024	Fusarium sp.
0940	Paecilomyces sp.	1025	Stachybotrys sp.
0941	Penicillium sp.	1026	Hormoconis resinae
0942	Phialophora sp.	1031	Hansfordia sp.
0944	Paecilomyces victoriae	1034	Aspergillus fumigatus
0945	Penicillium sp.	1036	Pithomyces chartarum
0949	Aspergillus niger	1042	Cladosporium sp.
0950	Paecilomyces varioti	1043	Phoma eupyrena
0951	Aspergillus fumigatus	1044	Scytalidium sp.
0952	Penicillium sp.	1045	Ulocladium atrum
0953	Penicillium frequentans	1047	Trichoderma sp.
0954	Aspergillus terreus	1048	Aspergillus sydowi
0955	Penicillium sp.	1049	Penicillium luteum
0956	Leptosphaerulina australis	1050	Penicillium sp.
0959	Penicillium sp.	1051	Phialophora sp.
0963	Aureobasidium pullulans	1053	Matruchotia varians
0964	-	1054	Ulocladium alternariae
0965	Penicillium sp. Trichoderma sp.	1055	Alternaria sp.
0967	Aspergillus sp.	1056	Aspergillus glaucus
	Penicillium citrinum	1057	Fusarium sp.
0969 0974		1058	Mortierella ramanniana
	Rhinocladiella sp.		
0975	Epicoccum nigrum	1059	Penicillium corylophilum
0976	Cladosporium elatum	1061	Gonatobotryum sp.
0977	Hyalodendron sp.	1062	Acremonium implicatum
0979	Cladosporium sp.	1065	Acremonium implicatum
0980	Paecilomyces sp.	1066	Alternaria sp.
0982	Scolecobasidium sp.	1067	Scolecobasidium sp.

1068	Penicillium chrysogenum	1125	Ulocladium atrum
1069	Epicoccum nigrum	1126	Alternaria sp.
1070	Tritirachium roseum	1127	Penicillium digitatum
1071	Rhinocladiella sp.	1128	Alternaria cheiranthi
1072	Fusarium nivale	1129	Stemphylium sp.
1073	Ulocladium atrum	1130	Monilinia sp.
1075	Penicillium ochrochloron	1131	Scolecobasidium constrictum
1076	Sporotrichum sp.	1132	Cladosporium sp.
1079	Botrytrichum sp.	1133	Penicillium sp.
1080	Curvularia lunata	1134	Penicillium sp.
1081	Curvularia eragrostidis	1135	Cochliobolus bicolor
1082	Curvularia prasadii	1137	Penicillium corylophilum
1083	Curvularia brachyspora	1138	Ulocladium chartarum
1084	Curvularia fallax	1139	Curvularia verruculosa
1085	Curvularia affinis	1140	Curvularia eragrostidis
1086	Curvularia pallescens	1141	Curvularia verruculosa
1087	Curvularia prasadii	1142	Curvularia clavata
1088	Curvularia clavata	1143	Curvularia sp.
1089	Curvularia oryzae	1144	Curvularia verruculosa
1090	Curvularia senegalensis	1145	Curvularia harveyi
1091	Curvularia inequalis	1146	Curvularia prasadii
1092	Curvularia eragrostidis	1147	Curvularia penniseti
1093	Curvularia lunata	1148	Curvularia pallescens
1094	Leptodontium elatium	1149	Curvularia sp.
1095	Gliomastix sp.	1150	Curvularia lunata var. aeria
1096	Phoma eupyrena	1151	Curvularia sp.
1097	Aspergillus fumigatus	1152	Curvularia lunata var. aeria
1098	Penicillium sp.	1153	Dreschlera papendorfi
1099	Paecilomyces sp.	1154	Curvularia geniculata
1100	Curvularia lunata	1155	Curvularia sp.
1101	Curvularia prasadii	1156	Curvularia senegalensis
1102	Aspergillus glaucus	1157	Curvularia senegalensis
1103	Hormeconis resinae	1158	Curvularia pallescens
1104	Nodulisporium gregarium	1159	Curvularia senegalensis
1108	Alternaria sp.	1160	Curvularia senegalensis
1109	Cladosporium sp.	1161	Curvularia senegalensis
1110	Cladosporium sp.	1162	Curvularia affinis
1111	Penicillium sp.	1163	Curvularia senegalensis
1112	Penicillium sp.	1164	Curvularia senegalensis
1113	Cladosporium sp.	1167	
1114	Cladosporium sp.	1168	Curvularia eragrostidis
1115	Cladosporium sp.	1169	Curvularia eragrostidis
1116	Cladosporium sp.	1170	Curvularia pallescens
1117	Cladosporium sp.	1170	Curvularia senegalensis
1117			Curvularia senegalensis
1119	Cladosporium sp.	1172	Curvularia eragrostidis
	Cladosporium sp.	1173	Curvularia eragrostidis
1120	Cladosporium sp.	1174	Curvularia eragrostidis
1121	Curvularia senegalensis	1175	Curvularia cantenulata
1122	Penicillium rubrum	1177	Curvularia prasadii

1178	Curvularia senegalensis	1241	Chaetomium tortile
1179	Curvularia senegalensis	1243	Chaetomium sp.
1180	Curvularia senegalensis	1244	Alternaria sp.
1182	Curvularia eragrostidis	1245	Penicillium sp.
1183	Chrysoporium sp.	1246	Aspergillus sp.
1184	Curvularia lunata	1248	Chaetomium sp.
1185	Curvularia senegalensis	1249	Pestalotia hordeidestrua
1187	Curvularia prasadii	1250	Nigrospora oryzae
1188	Curvularia brachyspora	1251	Trimmatostroma salicis
1189	Curvularia sp.	1252	Paecilomyces sp.
1190	Curvularia lunata	1253	Cladosporium sp.
1191	Curvularia intermedia	1254	Paecilomyces sp.
1192	Curvularia clavata	1255	Rhinocladiella sp.
1193	Curvularia tritici	1256	Fusarium sp
1194	Curvularia sp.	1259	Cladosporium sphaerospermum
1195	Dreschlera spicifera	1260	Nigrospora oryzae
1198	Curvularia eragrostidis	1261	Helminthosporium sp.
1199	Chaetomium globosum	1262	Curvularia eragrostidis
1202	Penicillium luteum	1263	Curvularia sp.
1203	Curvularia inequalis	1264	Curvularia pallescens
1204	Curvularia affinis	1269	Sclerotium sp.
1205	Fusarium sp.	1270	Aspergillus flavipes
1206	Rhinocladiella sp.	1272	Chaetomium spinosum
1207	Curvularia sp.	1273	Didymobotryum sp.
1209	Curvularia sp.	1274	Pithomyces sacchari
1210	Curvularia eragrostidis	1275	Alternaria sp.
1211	Curvularia sp.	1276	Curvularia brachyspora
1213	Chrysosporium sp.	1277	
1213	Penicillium expansum	1277	Phoma sp. Fusarium sp.
1214		1279	•
1217	Cladosporium cladosporioides		Botrytis sp.
	Botryodiplodia sp.	1280	Pithomyces sp.
1218	Pithomyces sp.	1281	Fusarium sp.
1219	Rhinocladiella sp.	1282	Curvularia pallescens
1220	Curvularia senegalensis	1283	Phoma sp.
1221	Phialophora sp.	1284	Rhinocladiella sp.
1222	Curvularia ovoidea	1286	Phoma sp.
1223	Chaetomium sp.	1287	Helminthosporium sp.
1225	Pithomyces sp.	1288	Actinonema sp.
1226	Botryodiplodia sp.	1289	Hyalodendron sp.
1228	Nigrospora sphaerica	1290	Acremoniella atra
1229	Pithomyces sp.	1292	Torula caligans
1231	Pithomyces sp.	1293	Spegazzinia lobulata
1232	Pithomyces sp.	1295	Dreschlera australiensis
1233	Pithomyces sp.	1296	Epicoccum nigrum
1235	Curvularia sp.	1297	Curvularia uncinata
1236	Curvularia lunata	1298	Leptosphaerulina australis
1237	Curvularia senegalensis	1299	Phialophora sp.
1238	Curvularia sp.	1301	Curvularia sp.
1239	Curvularia sp.	1302	Curvularia sp.
			1

1303	Curvularia sp.	1358	Penicillium luteum
1305	Periconia sp.	1359	Curvularia richardiae
1306	Periconia sp.	1359	Epicoccum nigrum
1307	Torula sp.	1361	Alternaria sp.
1308	Phoma sp.	1364	Monodictys sp.
1309	Paecilomyces sp.	1370	Cladosporium sp.
1310	Pithomyces sp.	1374	Cladosporium sp.
1311	Aspergillus sp.	1375	Cladosporium sp.
1312	Curvularia sp.	1376	Cladosporium sp.
1313	Phoma sp.	1378	•
1314	Curvularia sp.	1378	Cercospora sp. Sporothrix sp.
1315	Aureobasidium pullulans	1384	Alternaria sp.
1316	Chaetomium sp.	1385	
1317	Helminthosporium sp.	1386	Aureobasidium pullulans
1319	Cladosporium sphaerospermum		Chaetomium sp.
1320	Nigrospora sphaerica	1389	Stephanosporium cerales
1321	Alternaria sp.	1390	Cladosporium chlorocephalum
1322	•	1391	Aspergillus versicolor
1325	Nigrospora sphaerica	1392	Aspergillus ornatus
1325	Fusarium sp.	1395	Curvularia affinis
	Trichoderma sp.	1396	Curvularia inequalis
1327	Syncephalastrum sp.	1398	Pestolotia sp.
1328	Stachybotrys sp.	1400	Rhinocladiella sp.
1329	Alternaria sp.	1404	Curvularia sp.
1330	Stemphylium sp.	1405	Alternaria sp.
1331	Pestolotia sp.	1408	Fusarium sp.
1333	Phoma sp.	1414	Scopulariopsis brevicaulis
1334	Ulocladium sp.	1416	Stachybotrys chartarum
1335	Cladosporium herbarium	1418	Aspergillus amstelodami
1336	Penicillium herquei	1420A	Aspergillus foetidus
1337	Rhinocladiella sp.	1420B	Aspergillus foetidus
1338	Penicillium sp.	1425	Alternaria sp.
1339	Cladosporium sp.	1427	Penicillium sp.
1340	Curvularia sp.	1429A	Ramichloridium sp.
1342	Rhinocladiella sp.	1431	Piptocephalus sp.
1343	Alternaria sp.	1440	Ramichloridium subulatum
1344	Tritirachum roseum	1444	Gliocladium sp.
1345	Chaetomium sp.	1446	Sclerotium sp.
1346	Helminthosporium sp.	1501	Rhinocladiella sp.
1347	Aspergillus sp.	1504	Pyricularia sp.
1348	Aureobasidium pullulans	1512	Scopulariopsis sp.
1349	Rhinocladiella sp.	1516	Sporothrix sp.
1350	Stachybotrys sp.	1519	Septonema secedens
1351	Phoma sp.	1521	Veronea sp.
1352	Cephalosporium sp.	1527	Pithomyces sp.
1353	Gliomastix sp.	1544	Septonema sp.
1354	Trichoderma viride	1545	Ramichloridium sp.
1355	Aspergillus flavus	1547	Exophiala sp.
1356	Aspergillus niger	1550	Conioscypha sp.
1357	Paecilomyces varioti	1551	Rhinocladiella sp.
		1001	ramociaurena sp.

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1556	Ramichloridium sp.	1654	Aspergillus quercinus
1557	Paecilomyces sp.	1656	Acremoniula sarcinella
1559	Fusarium sp.	1658	Chloridium sp.
1564	Scopulariopsis sp.	1662	Cladosporium cladosporioides
1566	Ulocladium sp.	1667	Cladosporium cladosporiodies
1567	Cladosporium sphaerospermum	1668	Ramichloridium sp.
1568	Cladosporium cladosporioides	1670	Ulocladium sp.
1569	Rhinocladiella sp.	1671	Aspergillus versicolor
1570	Cladosporium sphaerospermum	1673	Aspergillus glaucus
1571	Cladosporium sp.	1675	Scopulariopsis brevicaulis
1574	Penicillium sp.	1676	Cladosporium sphaerospermum
1576	Cladosporium sp.	1679	Sporotrichum sp.
1578	Cladosporium cladosporioides	1680	Alternaria sp.
1579	Epicoccum nigrum	1681	Aspergillus niger
1583	Cladosporium cladosporioides	1682	Aspergillus fumigatus
1588	Cladosporium sphaerospermum	1683	Aspergillus flavus
1590	Cephalosporium sp.	1684	Aspergillus glaucus
1592	Dactylaria sp.	1685	Paecilomyces sp.
1593	Dendryphiella sp.	1686	Aspergillus versicolor
1598	Cladosporium cladosporioides	1687	Penicillium sp.
1601	Cladosporium sp.	1688	Aspergillus glaucus
1602	Cladosporium cladosporioides	1689	Paecilomyces sp.
1605	Cladosporium cladosporioides	1690	Penicillium sp.
1609	Curvularia sp.	1691	Scopulariopsis brevicaulis
1611	Cladosporium sp.	1692	Mucor sp.
1615	Dendryphiella sp.	1693	Epicoccum nigrum
1617	Ramichloridium sp.	1694	Fusarium sp.
1637	Penicillium echinatum	1695	Penicillium sp.
1638	Nigrospora sphaerica	1696	Aspergillus sp.
1651	Cladosporium sp.		

6. Cultures for Testing the Resistance of Materials to Fungal Growth

Australian Standard 1157, Methods of Testing Materials for Resistance to Fungal Growth. Standards Association of Australia, Sydney, 1972-78

Part 2 - Textiles

Aspergillus niger van Tieghem AMRI	72
Chaetomium globosum Kunze AMRI	
Part 3 - Cordage and Yarns	
Chaetomium globosum Kunze AMRI	74
Part 4 - Coated Fabrics	
Alternaria radicina Dreschler & Eddy AMRI	523
Aspergillus niger van Tieghem AMRI	
Aspergillus flavus Link AMRI	
Chaetomium globosum Kunze AMRI	
Paecilomyces varioti Bainier AMRI	
Syncephalastrum racemosum (Cohn) Schröter AMRI	
Part 5 - Timber	
Aspergillus flavus Link AMRI	. 5
Paecilomyces varioti Bainier AMRI	
Penicillium janthinellum Biourge AMRI	
Ulocladium consortiale (Thum) Hughes AMRI	
Part 6 - Leather	
Aspergillus awamori Nakazawa AMRI	E10
Aspergillus flavus Link Aspergillus flavus Link AMRI	
Paecilomyces varioti Bainier AMRI	
Part 7 - Paper and paper products	3 430
Tait 7 - Laper and paper products	
Aspergillus flavus Link AMRI	5
Aspergillus niger van Tieghem AMRI	. 72
Penicillium corylophilum Dierckx AMRI	L 1059
Part 10 - Adhesives and Glues and	
Part 11 - Rubbers and Plastics	
Alternaria radicina Meier, Dreschler & Eddy AMRI	523
Aspergillus flavus Link AMRI	
Aspergillus niger van Tieghem AMRI	
Paecilomyces varioti Bainier AMRI	
Syncephalastrum racemosum (Cohn) Schröter AMRI	

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ABSTRACT

The Australian National Collection of Biodeterioration Microfungi is held at DSTO-AMRL, Maribyrnong, Vic. For over fifty years, it has been the repository for microfungi from diverse sources, mainly from materials and equipment. It is now a resource for taxonomic and physiological assessment, potential tools in biotechnology and for testing purposes. This is the first published catalogue of the collection.

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F. John Upsher and Corinne M. Upsher

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